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MISCELLANEOUS BILLS AND OTHER MATTERS

HEARINGS

BEFORE THE

COMMITTEE ON AGRICULTURE

HOUSE OF REPRESENTATIVES

SIXTY-SECOND CONGRESS

SECOND AND THIRD SESSIONS

ON

MISCELLANEOUS BILLS AND OTHER MATTERS

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STAMPING OUT THE MEDITERRANEAN FLY IN HAWAII.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Wednesday, January 22, 1912.

The committee met at 10.30 o'clock a. m., Hon. John Lamb (chairman) presiding.

The CHAIRMAN. We have two of our colleagues here this morning who wanted to be heard on a bill relating to the Mediterranean fly. I will ask Mr. Hayes, of California, to proceed.

A BILL Making an appropriation to assist in stamping out the Mediterranean fly in the Territory of Hawaii.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the sum of $50.000, or so much thereof as may be necessary, be, and the same is hereby, appropriated, out of any money in the Treasury not otherwise appropriated, to be expended by the Bureau of Entomology, under the direction of the Secretary of Agriculture, in the study of the habits and enemies of the Mediterranean fly, and to assist the people of Hawaii in stamping out this pest and stopping its ravages in said Territory.

Mr. HAYES. Mr. Chairman, Mr. Kahn and I some days ago introduced a bill asking for a $50,000 appropriation to be spent by the Bureau of Entomology under the direction of the Secretary of Agriculture, in the study of the habits and the natural enemies of the Mediterranean fly, and to assist the people of Hawaii in their efforts to stamp out the pest. This is a new fruit pest, and you probably have never heard of it, or if you have, its habits and methods are entirely unknown to you. The fact of the matter is, in a hundred years no pest has appeared that has so disturbed the fruit industries of the world as has this one. Beginning, as it is supposed, about the Mediterranean Sea, it has migrated to the islands adjacent to Italy, to Africa, to Australia, and finally now it is in Hawaii, having last year destroyed the entire peach and other fruit crops of Hawaii. My colleague, Mr. Kahn, has recently made a visit to Hawaii, and can speak from personal observation of the ravages of this pest. I will not dwell upon that. It has absolutely and totally destroyed the fruit crops, and even some of the vegetable crops of South Wales and other parts of Australia. The only remedy that has been found for it is to inclose the trees with mosquito netting.

Mr. PLUMLEY. When was it first discovered?

Mr. HAYES. I do not know, but it is within a few years. I do not think it has been known to exist, or at least it did not begin its ravages until within the last three or four years.

Mr. PLUMLEY. When did it appear in the Hawaiian Islands?

Mr. HAYES. In the last year or so.

Mr. KAHN. It is supposed to have reached the islands two years ago, from Australia, but its effects were not visible until last year.

Mr. PLUMLEY. How was it taken from Australia?

Mr. KAHN. By vessels that plied between Australia and Hawaii, and it has been transferred to these other coasts in the same way. It goes in the form of maggots in the fruit. We can not see that there is anything in the fruit until it is cut open.

Mr. LEVER. Is there considerable shipment of such fruit, which the fly comes in, from Australia to Hawaii?

Mr. KAHN. There are some apple shipments, and various other shipments.

Mr. LEVER. And it attacks other fruit besides the peach?

Mr. HAYES. Yes, sir. It attacks the citrus fruits at first, and it also attacks beans, tomatoes, and green peppers. In the island of Malta and St. Helena it has destroyed the fruit industry and the vegetable industry, upon which the people of those islands depended, and there are agents now in California looking for land to colonize the destitute people from those islands, whose means of livelihood has been destroyed.

Mr. LEVER. Do you think it will be better to make a separate appropriation, and would have a Federal inspection of fruit, and so on?

Mr. HAYES. I would be very much in favor of both.

Mr. LEVER. Do you remember last session a bill providing for inspection of foreign nursery-stock importations that came up in the House and was attacked viciously?

Mr. HAYES. Yes, sir; I remember that very well.

Mr. LEVER. And it failed of passage?

Mr. HAYES. Yes, sir; but my attitude was in favor of it, and if it ever comes up again——

Mr. LEVER. And the only thing of significance is Federal inspection?

Mr. HAYES. Yes, sir.

Mr. LEVER. And the United States is attempting to grant them all the help?

Mr. HAYES. Yes, sir; but in this case something more is necessary than inspection, because it has got into Hawaii. We have the very best protection that the State of California can give us, but we want enough money to destroy the pest out in Hawaii, which is at our very doors. Only so can we be fully protected.

The CHAIRMAN. Would you prefer that this committee take up this bill and consider it and pass it and other——

Mr. HAYES. No.

The CHAIRMAN. Would you be satisfied with results such as we might reach?

Mr. HAYES. Results are what we are after. Instead of considering this bill that we introduced, merely to call the committee's and the public's attention to what is desired and ask for an appropriation sufficient, in the view of the committee, to meet the situation, I suggest that the appropriation be incorporated in the agricultural appropriation bill.

STATEMENT OF REPRESENTATIVE JULIUS KAHN, OF CALIFORNIA.

Mr. KAHN. Mr. Chairman and gentlemen of the committee, I visited Hawaii this summer and there first learned of the ravages of this insect pest. The people of Hawaii have for many years conducted a local campaign against insect pests, and they expend every year something like seventy or eighty thousand dollars in stamping out those pests that affect their particular crops. Fruit raising for profit is not conducted on a large scale in the Hawaiian Islands, except in the case of pineapples and bananas; and, strange to say, this pest has not attacked as yet in Hawaii the pineapple or the banana, although Dr. Howard, of the Agricultural Department, has informed me that the Mediterranean fly has attacked the pineapple in Australia, and I have also learned that it has attacked the banana in some countries. The female fly punctures the skin of the ripening fruit and deposits her eggs underneath the skin. This puncture is not visible to the naked eye, and you can not tell from the outside appearance that the fruit is infected. After a little while these eggs breed out into maggots that look like the so-called cheese "skippers." When the fruit falls to the ground it bursts open and these "skippers" move along rapidly until they find a soft spot in the earth. They crawl underneath and there they develop. They come out a little fly—smaller than the common house fly—beautifully marked with brown spots on the wings and brown spots on the head, making a rather attractive little insect.

In Hawaii you have a very unusual condition for the propagation of this insect. You have the wild guava growing in abundance everywhere. There are thousands of acres of wild guava bushes, and the fly has attacked the wild guava. Much of it grows on the precipitous sides of the mountains of Hawaii, and man can not reach it. I believe that it will be necessary for the department, in order to thoroughly exterminate the pest down there, to burn off or otherwise destroy the wild guava. The fly was first discovered in the citrus fruits, the oranges there, but it has attacked nearly everything in the way of fruit except those two that I have mentioned, the pineapple and the banana. It has destroyed the bean crops down there and it has destroyed their green-pepper crops. It has even attacked the mango, with its thick skin, even though the skin has a very pungent taste and smell, not unlike turpentine. The State of California has a very excellent horticultural commission, which is maintained at great expense by the people of the State. We inspect everything that comes into our State in the way of fruit, nursery stock, or foliage of any kind.

Mr. HANNA. Will an inspection, if the worms are hidden in the fruit, disclose their presence?

Mr. KAHN. No.

Mr. HANNA. If every bit of fruit is inspected?

Mr. KAHN. We do not allow any fruit at the present time to come into California from Hawaii except bananas and pineapples. Even the succulent alligator pear, which had grown to be a favorite article of diet with us, has been shut out.

Mr. HANNA. Suppose the fruit is consigned to Kansas; you could not prevent it then?

Mr. KAHN. We would try in some way to stop it from landing on our shores.

The CHAIRMAN. Why do you so much apprehend danger from the fly if you have such strict regulations as that?

Mr. KAHN. Because the other States have not such strict regulations and they can come from other States into our borders. The State of California, with its millions of dollars invested in the fruit industry, the State of Oregon, and the State of Washington are vitally interested in this matter, but with the opening of the Panama Canal in a few years shipments of fruits direct from Hawaii will come to the eastern ports through the canal.

The CHAIRMAN. When it strikes this country, it makes its first appearance on the seaboard?

Mr. KAHN. Yes, sir.

The CHAIRMAN. Does it go very far in extent?

Mr. KAHN. It spreads rapidly and ravages the entire country.

Mr. LEVER. Can it live in a cold country?

Mr. KAHN. Yes, sir; they say it can live in the Torrid Zone as well as in the Frigid Zone; it will live anywhere where fruit will grow.

Mr. LEVER. Has any entomologist reported on this pest?

Mr. KAHN. Mr. Hays and I have seen Dr. Howard a number of times and we have seen the Secretary of Agriculture. They are in hearty sympathy with the effort to stamp out this pest, and they recognize the importance of this legislation. The entomologist of the State Board of Horticulture of California has made a bulletin on the pest and its ravages in Hawaii.

Mr. LEVER. What do they do in Italy?

Mr. KAHN. They have done very little; in fact, they have done nothing. This pest is gradually going around the world. It is in Brazil, Australia, New Zealand, St. Helena, and the island of Malta, as well as in the Hawaiian Territory.

Mr. HANNA. Does it attack grapes?

Mr. KAHN. Yes, sir; and it wipes out the grape crop. It attacks most of the other fruits. It has attacked, in New Zealand, peaches, cherries, pineapples, persimmons, oranges, apricots, pears, and bananas. The damage is done by the fly laying its eggs under the skin of the fruit at the period when the fruit is ripening and the puncture made by the fly never shows.

Mr. LEVER. These flies, wherever they come from, can they be destroyed by spraying?

Mr. KAHN. No, sir; they have not been able to accomplish anything by spraying. The female fly lays her eggs under the skin of the fruit, and then as the fruit ripens the puncture heals over and you can not tell by the appearance of the fruit that it is infected.

Mr. LEVER. Where do these maggots lodge—under the skin?

Mr. KAHN. All through the fruit; and they would do no damage if they were to continue in the fruit, other than to make the fruit unpalatable to anybody that might want to eat it; but the fruit when it ripens falls to the ground and bursts open, and then these "skippers" crawl into the soft ground and ultimately emerge as flies. The life of the fly is 28 days; or rather, a new generation is born every 28

days. Of course, we are solicitous that it may not find a lodgment in this country, as it would undoubtedly destroy the fruit crops of any State where it gets lodgment.

Now, we recognize the fact that if strenuous efforts had been made at the very beginning when the brown-tailed moths were brought over here to stamp out that insect pest we would not have had to expend the many millions of dollars that we have been expending since then to stamp them out; and so we feel that if your committee sees its way clear to make this appropriation at this time, so as to allow the Secretary of Agriculture, through the Bureau of Entomology, to send experts to Hawaii to help stamp out this Mediterranean flay, it will be a great saving in the long run, and it will be a protection to the fruit industries of this country.

The CHAIRMAN. We have a bill already that seems to cover that.

Mr. KAHN. That, of course, provides for rigid inspection of nursery stock coming from abroad, but Hawaii is not a foreign country. It is a part of our own country. I want to say in all fairness to the people of Hawaii that last year they raised a fund of $8,000 to help stamp out this pest. They have been doing what they can to eradicate this evil, but I do not think inspection is enough. The people there ought to be protected and helped, and the pest ought to be wiped out so far as it can be wiped out.

Mr. HOWELL. Has the State of California done more than any State in the Union——

Mr. KAHN. There is no State in the Union that appropriates as much money for the eradication of insect pests. We have a board of horticulture and a large corps of entomologists, who have done remarkable work. Our entomologists have brought to this country numerous parasitic enemies of insect pests, and I think the officials of the Department of Agriculture will tell you that if every State in the Union were doing as much as the State of California is doing we would have nothing to fear. As a matter of fact, our great citrus-fruit industry is largely near the Mexican border, and the Mololos worm, which attacks the oranges in Mexico, is an insect pest that would work irreparable damage to us if it ever got into the State of California. We have manged to keep that worm out of the orange groves of California. We of California have expended millions of dollars to do that kind of work.

Mr. LEVER. What appropriation do you think is necessary for this purpose?

Mr. KAHN. Dr. Howard thought $50,000 would be necessary. I want to say that scientists have not as yet been able to find a parasite that is a natural enemy of this fly—that will kill this fly—and that is one of the things that worries the entomologists. The only thing they have been able to do in Hawaii up to the present time—or so, at least, Dr. Wilcox, of the experiment station at Honolulu, told me—is to gather up the fruit and burn it. They gather as much of the affected fruit as they can and burn it to keep the pest down as much as possible.

Mr. HOWELL. Has that fly reached California?

Mr. KAHN. Not yet, but we are fearful that it will. We are not so much afraid of its coming into California direct, because we have a very rigid quarantine inspection of all fruit and foliage that comes from the Hawaiian Islands.

Mr. HANNA. Is there any danger of the fly coming over in the vessels?

Mr. KAHN. Yes, sir.

Mr. HANNA. I mean the fly itself.

Mr. KAHN. Efforts are being made to prevent fruit from Hawaii from being landed; the landing of such fruit is one of the sources of danger which exists. Take the orange that grows over there. Of course you know the Hawaiian orange does not have the color of the orange in this country even when it is fully ripened. It is green even when it is ripe. Passengers try to bring it in surreptitiously. They will not allow the orange to come through for fear of that insect pest.

The CHAIRMAN. I have a letter from Dr. Howard in reply to one I wrote him about this matter, in which he covers pretty much the points you have made; but I will read it to the committee when we come to this matter.

Mr. LEVER. I would like to suggest that the method of gathering up the fruit and burning it seems to be a rather cumbersome and expensive method, and perhaps the only way you will manage this pest is through the parasite remedy; and if that is the fact, then a smaller appropriation will start the work.

Mr. KAHN. Of course, the trouble is that up to the present time they have not been able to discover a natural enemy to the fly. The only difficulty about the situation in Hawaii is these great areas of wild guava. I believe you will have to burn them out.

Mr. LEVER. You think $50,000 will be sufficient?

Mr. KAHN. I think so. You have the precipitous mountain sides where the wild guava is growing, and so long as the guava is infected you can not stamp out that fly until you find its natural enemy, and that, of course, is a matter that has engaged the attention of entomologists of all countries for a good many years.

Mr. LEVER. What would be the attitude of the natives in reference to such a system of stamping out this fly?

Mr. KAHN. The wild guava has no commercial value. There will be no objection to that, because as yet it has not been utilized for any purpose. The natives themselves would have no objection, I am positive; and I do not think that any of the people who own or live on the land on which these wild guava bushes grow would have any objection. To show you how easily the pest spreads, I may say it was first introduced on the island of Oahu about two years ago, and it has spread all over that island. Senator Fairchild, of the Hawaiian Legislature, called on me at my office to tell me that it had crossed the channel into Kauai, an island probably 75 miles north of Oahu. The fly is now devastating the fruit crops of that island.

Mr. LEVER. My idea is first to pass the Simmons bill, so as to throw around the Hawaiian Islands every precaution against the infested areas.

Mr. KAHN. Of course, they have the pest there now.

Mr. LEVER. That is very true now, but my idea was that you may stamp them out to-day and to-morrow you may get them back again.

Mr. KAHN. I think both propositions ought to be enacted, but I think the all-important one, so far as the interests of the United States proper are concerned, is to stamp out the pest that exists there now for fear that it will come over to the mainland; and then

the Simmons bill will take care of any future situation. But I think it is all important that at the beginning the pest should be stamped out in Hawaii.

Mr. LEVER. How long do you expect this appropriation to continue?

Mr. KAHN. Dr. Howard and the Secretary of Agriculture, when I discussed the matter with them, thought that they would be able to send some of their experts down to Australia to see whether they could no find an insect down there that would be a natural enemy to this pest.

The CHAIRMAN. Then you would like a small amount of it to be immediately available?

Mr. KAHN. Yes; I think so. Our Pacific Coast States are agricultural States; they are not manufacturing States. They depend almost entirely on their fruit crops. The amount of money that is invested there has grown to be very large, and a pest of this kind, if it once should get a foothold, would immediately cause every State in the Union to quarantine against our fruits. They would have to do it in self-defense, because the ravages of this insect are rapid and considerable, and every 28 days there is a new generation of the fly.

Mr. HANNA. In the areas of the wild guava can you burn them by setting fire to them or by getting them out and burning them?

Mr. KAHN. Oh, yes; you can burn them by setting fire to them.

Mr. HANNA. Can you burn them without burning other stuff that is valuable?

Mr. KAHN. Oh, yes. These great areas of wild guava exist all over the islands, and the guava runs up on the sides of the mountains. There is nothing that is valuable in and around these areas.

Mr. MCLAUGHLIN. Don't they grow in the forests?

Mr. KAHN. They have attacked the mango in Hawaii.

Mr. MCLAUGHLIN. Wouldn't it also destroy the forests?

Mr. KAHN. No, sir. The guava grows on a bush. The bushes extend for miles.

Mr. HAWLEY. Are there any fruits imported from the islands to the United States?

Mr. KAHN. Yes; but since we quarantined against all fruits except pineapples and bananas the shipments have fallen off. Any fruit that might come from Australia to the Pacific coast would have to be landed in Vancouver, British Columbia, because there is no direct line from Australia to the United States, although the Union Steamship Co., an Australian line that now runs between Sydney and Vancouver, contemplates running a line between Sydney and San Francisco, and San Francisco would be the last port of call on that particular line. There might be some danger from that source, but our entomologists would examine everything that comes in the shape of fruit on these vessels. I want to say in closing that the American vessel and even the foreign vessel that comes to the port of San Francisco is exceedingly kind in helping along the matter of inspection. They have allowed our horticultural quarantine officers to go aboard their vessels and throw the fruit they bring into the Bay of San Francisco.

Mr. RUBEY. Is there any way to protect the Fruit Growers' Association but in the matter of competition?

Mr. KAHN. There is no such thing in California as a fruit trust or fruit trusts. My colleague, Mr. Hayes, knows that. Fruit growing in California is done on a very large scale, and every man who grows his crop sells his crop.

Mr. HAWLEY. Is there an association that is furnished with cars more promptly than others that own and operate cars?

Mr. KAHN. The Earle Fruit Co., in southern California, sends out oranges, and I believe they have a patented car; but the ordinary car for shipping fruit across the continent is available to all growers.

Mr. HAWLEY. Any time one is furnished as promptly as the other?

Mr. KAHN. Yes, sir; that is my information, at any rate. There is no trouble about that, unless there is an exceptionally large crop and the railroads have not enough cars on hand. The rate for the use of the cars is the same to everyone.

Mr. HAYES. In regard to the necessity for speedy action, I hope the committee will not defer action or defer making an adequate appropriation. Our State thought is sufficiently important to call the legislature in special session with the sole purpose of passing a stricter quarantine bill in order to quarantine against this pest. I hope that the appropriation may be made adequate, so that this pest that threatens not only California but the entire country and the fruit crops may in the end be entirely exterminated.

The CHAIRMAN. You can rest assured that we will consider the matter very seriously.

STANDARD GRADES OF COTTON.

JANUARY 22, 1912—Continued.

The CHAIRMAN. Now, gentlemen, Mr. Neville, president of the New York Cotton Exchange, wishes to be heard upon the establishment of standard grades for cotton by the United States Department of Agriculture.

STATEMENT OF MR. GEORGE W. NEVILLE, PRESIDENT OF THE NEW YORK COTTON EXCHANGE.

Mr. NEVILLE. Mr. Chairman and gentlemen of the committee, the other day while I was in Washington I happened to learn that at a meeting of this committee, in the testimony of Dr. Galloway on the question of appropriations, in response to questions asked him, he replied regarding the adoption of the standard classification (made by a committee of experts in pursuance of the resolution passed by Congress in February, 1909) that the New York Cotton Exchange had not adopted those standards, but that they had been adopted by the New Orleans Exchange and other exchanges. I wish to state that the standards have not been adopted by any cotton exchanges in the Atlantic States, and under existing conditions these exchanges can not adopt those standards. We want uniformity in grades or standards, as they are sometimes called, but the standards as made by this committee of experts were made up of cotton from Memphis, Tenn., New Orleans, La., and Houston, Tex.; no cotton grown in the Atlantic States was used in making these standards, and each of those groups is subdivided as to staple qualifications and grades. All quotations for cotton the world over are based on upland cotton for all grades.

The other growths have better staple, which command a premium above those quotations for the upland cotton. The New York Cotton Exchange has always stood for uniformity in grades and adhere to the standards made in September, 1874, in pursuance of a resolution passed by the cotton exchange in existence at that time. These cotton exchanges met in Augusta, Ga., June 10, 1874, and the meeting was at the instance of the New Orleans Cotton Exchange. There were delegates to this convention from the following cities: Athens, Ga.; Atlanta, Ga.; Augusta, Ga.; Baltimore, Md.; Boston, Mass.; Charleston, S. C.; Charlotte, N. C.; Galveston, Tex.; Louisville, Ky.; Memphis, Tenn.; Mobile, Ala.; Montgomery, Ala.; Nashville, Tenn.; New Orleans, La.; New York, N. Y.; Norfolk, Va.; Opelika, Ala.; Savannah, Ga.; St. Louis, Mo.; and Wilmington, N. C. These cotton exchanges formed what was then known as the National Cotton Exchange.

Among the order of business was the adoption of a uniform standard of classification for the United States. The committee appointed to consider this matter consisted of Mr. John Chaffee, as chairman, and other members. Mr. Chaffee was from the New Orleans Cotton Exchange; the other members were from Charleston, Galveston, Memphis, Mobile, New York, and Savannah. This committee reported unanimously to the body that it was thought necessary—a very necessary thing—to have a uniform standard, and at that time, through their recommendation, a Mr. John T. Doswell, of New Orleans, La., was elected chairman of a committee of experts to adopt a standard classification, each of the experts to be composed of representatives from the cotton exchanges throughout the country present at that meeting in Augusta. The following composed this committee: Mr. J. T. Doswell, of New Orleans, chairman; A. K. Childs, Athens, Ga.; J. H. Cohen, St. Louis, Mo.; Thomas Fenner, New York, N. Y.; S. M. Gates, Memphis, Tenn.; J. E. Gilbert, Nashville, Tenn; J. E. Ginn, Eufaula, Ala.; J. C. Graham, Selma, Ala.; D. E .Huger, Mobile, Ala.; S. M. Inman, Atlanta, Ga.; R. M. Powle, Baltimore, Md.; W. D. Reynolds, Norfolk, Va.; C. E. Richards, Galveston, Tex.; William C. Sibley, Augusta, Ga.; B. R. Smith, Boston, Mass.; J. E. Stenhouse, Charlotte, N. C.; L. L. Taylor, Cincinnati, Ohio; and William H. Woods, Savannah, Ga. This committee met in New York, N. Y., and on the 1st of September, 1874, the first American standard classification was adopted. It was adopted effective in October, 1874, by all exchanges which participated in that convention in Augusta, Ga.

These standards were used by all of the exchanges for the seasons of 1874 and 1875 and by many others up to within the last 10 or 15 years, when each exchange went back to their methods of classification. The New York Cotton Exchange advocated the making of standards under Mr. Burleson's recommendation, and gave the Bureau of Plant Industry of the Department of Agriculture the use of one of its best men in Washington to make the standards after the committee of experts had determined what they should be. He stayed in Washington from February, 1909, at intervals until April 11, 1910—all told, about 127 days—assisting the Bureau of Plant Industry in making these standards. As a member of this committee of experts having to make these standards, immediately the work was finished I applied for two sets of those standards, one for the New York Cotton Exchange and the other for my firm. That was in February, 1909. The New York Cotton Exchange did not receive a copy of those standards until August, 1910. At the time of the making of these standards in February, 1909, I drew the attention of the other members of the committee to the fact that we should have three sets of standards made, viz, of upland cotton or Atlantic States cotton and the other Orleans-Gulf and Texas cotton, but unfortunately the Bureau of Plant Industry was unable to get any cotton from the upland or Atlantic States to make those standards, and as it seemed urgent the committee worked with the cotton on hand and made a standard out of the Memphis, New Orleans, and Texas cotton.

When the standards were sent to the New York Cotton Exchange they were submitted to what we call the "warehouse" and delivery committee, the committee of merchants having in charge the inspection of cotton for delivery on contract. As soon as the boxes were

opened it was perfectly plain that the standards had been made up of growths other than upland cotton, which is the basis of all the trading on contracts for the future delivery of cotton. They immediately got into communication with Dr. Cobb, of the Bureau of Plant Industry, with the result that we had an interview with him in New York, and at his request a set of standards was made up of upland cotton to match in all particulars the grades shown by those standards made in Washington with the upland characteristics of color and staple. These standards are in the possession of the Department of Agriculture, Bureau of Plant Industry, in Washington to-day. We feel and know, as actual handlers of cotton all over the cotton belt, that it is impossible for any market in the Atlantic States trading in cotton to adopt the standards as they are to-day, not that there is any objection to the grades as made, but gentlemen, it did not go far enough. There should have been a set of standards made up of upland cotton. Those who are familier with the cotton business know that each growth that I have mentioned has a distinctive appearance, which is ascertainable to the average man, even though he be not an expert in cotton.

Another thing which the New York Cotton Exchange has had under advisement with the Department of Agriculture is that in the making of these standards the basis of the grades made was that used commonly over the South in shipping cotton for export, the exportation of cotton, roughly speaking, being about two-thirds of the cotton grown in this country, and custom, before grades were established in this country, grew up that there was a basis grade formulated by Liverpool, which was the largest consumer of American cotton for many years, grades which they gave to cotton taking middling as a basis, and the committee having in hand the making of these standards took the middling as shipped from the South to correspond commercially with the grade of fully middling that the foreigner accepted from the American exporters. These grades as shipped would not match the standards in force on the Liverpool or Bremen or Havre cotton exchanges, but the European merchants and spinners accept them as a commercial fulfillment of the contract of sale. In making these standards the present good ordinary cotton, which the New York Cotton Exchange recognizes and which was made by that committee of experts in 1874, was eliminated, due to the fact that in order to make all grades uniform (there being a distinctive difference between each grade), the present good ordinary was not provided for in the legislation that was enacted in Congress with the result that a very large proportion of the American crop to-day is without a standard based on the Government standard. That happens this season in particular.

Some of my southern friends on this committee will no doubt know that the grades of cotton picked in the South for the past few months have been very low, due to the bad weather, and they can not get values for these grades. The farmer had no control whatever of this yield; nature did it by the bad weather. We feel that a standard should be made to provide for the present good ordinary cotton.

Mr. LEVER. What is the lowest standard now, the Government standard?

Mr. NEVILLE. Good ordinary in name.

Mr. LEVER. You want it to be one?

Mr. NEVILLE. One more grade below good ordinary to take the place of the present good ordinary American standard classification. I would call that strict ordinary. I will show you the exact samples of this grade later. Then again the standards as adopted call for grades running from strict good middling to good ordinary, and I have told you how under the system that the committee adopted (which, in the opinion of the committee, would cause the least confusion throughout the cotton belt) the grades of middling fair and fair cotton were not provided for.

There are times, gentlemen, when the nonexistence of a standard for the present good ordinary and for middling fair and fair would not work any hardship on the producer; but there are times when, not having a standard for those grades, a great hardship is worked on the producer by not having the means of ascertaining the market value for his product. You take the crop of to-day, a large proportion of which is of very low grade—the grade that I ask to be standardized—the present good ordinary has a distinct spinning value, usable in any kind of fabric that goes into the ordinary use of the people who buy ginghams or calicoes. If it is used in dry goods it can be used in the highest class of ginghams. If it is used for fancy shirtings or for ladiees' underwear, it can not be used; but wherever it is used, it can be used for middling cotton or any other grade of cotton. Now, with the grades of middling fair and fair there are times that the product of that crop is very large, particularly in Congressman Lever's district, and not so much in Mr. Heflin's district, but in the settlements of Texas around San Antonio, all through that section of Texas represented by a line drawn from Houston, Tex., to San Antonio south, and a little north of that line it is grown some seasons in very large quantities, and you are practically forcing everything above strict good middling to be classed as strict good middling. Yes, sir; you are forcing the present good ordinary standard to be classed below that standard, with the prices fixed on it according to the exigencies of the situation. If there is a fair demand for the grades the farmer will get a fair price. If there is no demand he will get a price so low that it will not pay a man to buy it unless he buys it as junk. I have here samples of good ordinary and yarns made from this cotton that I received from textile schools in the United States. That grade is ostracized under the present Government standard.

Mr. HEFLIN. The trouble with this thing is it is not in the fiber.

Mr. NEVILLE. That is just the coloring trash at the end near the fiber. There is the yarn that is made from that identical cotton.

Mr. HAWLEY. The grade below produces a better yarn?

Mr. NEVILLE. No, sir.

Mr. HAWLEY. Are those two grades that you spoke of exhibited here?

Mr. NEVILLE. I am showing only the good ordinary, the yarn produced from cotton that is ostracized under the present Government standard.

Mr. HAWLEY. And the other yarn is from cotton that has the lowest rating?

Mr. NEVILLE. Yes, sir.

Mr. LEVER. Your idea is, then, that they have given that a bad name?

Mr. NEVILLE. That cotton has a distinct value. All the wastage in the way of trash is easily figured out, and the finished yarn I have shown you. That yarn has been tested in the two textile schools of this country—the Lowell Textile School and the Clemson College Textile School. Mr. Earl, of the Clemson College Textile School, is an employee of your department to-day, and he can give you more figures on it than I can.

Mr. WICKLIFFE. The percentage of waste?

Mr. NEVILLE. The waste of that finished yarn is 21½ per cent.

Mr. LEVER. In your judgment, on account of this debasement of this grade of cotton, what is the lowest price per pound?

Mr. NEVILLE. I would say, conservatively speaking, $5 a bale below its worth in spinning.

Mr. LEVER. The establishment of this new standard would add $5 per bale?

Mr. NEVILLE. Yes, sir.

Mr. LEVER. What percentage of this kind of cotton will be produced this year?

Mr. NEVILLE. I would say, Mr. Lever, it is a difficult, hard thing to do. I can only answer that by giving a résumé from our Texas office or Greenville (S. C.) office. Our percentages of present receipts are about 10 per cent of that grade and the grades below it—strict ordinary.

Mr. LEVER. That runs, on the average, 5 per cent of the total crop?

Mr. NEVILLE. In some seasons it is more than that.

Mr. LEVER. Is it on account of the fact that you do not have these two grades in the Government standards that the New York Cotton Exchange has failed to accept that standard?

Mr. NEVILLE. That is one reason, and another reason—it is not made up of upland cotton.

Mr. LEVER. These grades here are not made up from upland cotton?

Mr. NEVILLE. No, sir. It is made from Memphis, Tenn., and New Orleans, La., and Houston, Tex. There were not 50 pounds of upland before the committee of experts in February, 1909, that we could use for the making of standards.

Mr. LEVER. Why?

Mr. NEVILLE. I do not know. You will have to ask some one else. Fortunately, thinking there would be standards made up of Texas and Orleans-Gulf, and being that I was largely in business in Texas, I took the precaution to have sent me by express to Washington enough cotton of Texas growths to make two sets of standards for each of the grades called for in the resolution. Mr. Crump, of Memphis, sent his up from Memphis, and Mr. Airey, of New Orleans, who was on the committee, sent his up from New Orleans. If we depended upon the department's man that they had sent out we would not have gotten any; he was not able to get the material.

Mr. LEVER. I confess great surprise at these statements and that these samples were not made of upland cotton.

Mr. NEVILLE. They could not be had.

Mr. LEVER. What proportion of upland cotton is grown?

Mr. NEVILLE. It looks like Georgia will make this year about 2,750,000 bales; North Carolina, 1,000,000 bales; South Carolina, 1,600,000 bales.

Mr. LEVER. Approximately, then, you will say about one-third of the crop is not standardized?

Mr. NEVILLE. Yes, sir; in those States; but there is some upland cotton produced in other States.

The CHAIRMAN. Have you taken this matter up with Dr. Galloway?

Mr. NEVILLE. In reading Dr. Galloway's appearance before your committee in December, I notice the meager reply or the meager information that Dr. Galloway supplied you gentlemen with, but as soon as I found it out I made up my mind that something should be clarified, and I am here to clarify it.

The CHAIRMAN. Dr. Galloway's statements were made in reply to my questions?

Mr. NEVILLE. Yes, sir; I understand; and Dr. Galloway had all this information. I gave it to him in November and the cotton exchange gave it to Dr. Cobb in letters.

The CHAIRMAN. I would like to say, in that connection, that neither Mr. Wickliffe nor myself attempted to draw Dr. Galloway out on the assumption that these standards here involved the entire cotton crop.

Mr. NEVILLE. No, sir; they do not. The Atlantic States production is not standardized.

Mr. HAWLEY. Did you approve of the standards as far as they go, and you are now contending for other grades?

Mr. NEVILLE. Yes, sir.

Mr. HAWLEY. Everything else provided, you will be satisfied with the standard?

Mr. NEVILLE. Yes, sir; but we want a standard classification that represents cotton that is quoted and traded in on all cotton exchanges and in all cotton markets. While I am president of the New York Cotton Exchange, I have one vote only, but it is my duty as president of the exchange to study the welfare of the exchange and present to the members for adoption such matters that I regard as desirable for the entire cotton trade. I regard this as a very necessary thing in the cotton business, and we are——

Mr. HAWLEY. And so regarded by other exchanges?

Mr. NEVILLE. As far as I know; yes, sir; but we can not adopt them as they are now. I want to state that at a meeting in New York in October, 1911, between representatives from the American Manufacturers' Association (embracing southern mills) and representatives from the National Cotton Manufacturers' Association (embracing the northern mills) met committees from the New Orleans and New York Cotton Exchanges to consider certain recommendations that the manufacturers wanted to make to the cotton exchanges, and after seven hours' conference, participated in very generally—by the way, a copy of that discussion is in Dr. Cobb's hands to bear out what I am going to tell you now—and during that discussion I was asked why the New York Cotton Exchange had not adopted those standards, and I told the gentleman that we could not adopt them, and told them briefly what I have told you here to-day,

with the result that Mr. Franklin W. Hobbs, president of the National Association of Cotton Manufacturers, offered a resolution, which was seconded by Mr. Parker, of the American Association of Cotton Manufacturers, moved that it be requested of the Department of Agriculture to prepare a standard set of samples representing upland cotton, to conform to the present standards but made up of upland cotton. There was an amendment to that by Mr. Parker that myself and Mr. C. W. Francis and Mr. Hobbs be appointed a committee to convey those resolutions to Secretary Wilson. Acting for the other members of the committee, I presented the entire matter to Secretary Wilson in November, 1911. I made this request not only as president of the cotton exchange, but as a very large handler of cotton also. We want uniformity. We do not want middling cotton quoted in one section at one price and at another price in another section, the difference in price being due to difference in classification.

Mr. HEFLIN. Did I understand you to say just now that none of the exchanges had adopted——

Mr. NEVILLE. None in the Atlantic States have adopted them. Memphis has adopted them. New Orleans has adopted them. Galveston has adopted them, and some of the smaller markets have adopted them, but to my knowledge, and I think the Department of Agriculture—the Chief of the Bureau of Plant Industry told me so or will bear me out—that none of the standards have been adopted by any cotton exchanges in the Atlantic States.

Mr. LEE. They only adopted them because they had to?

Mr. NEVILLE. The standards are made all right, but they do not go far enough.

Mr. HEFLIN. There are nine standards?

Mr. NEVILLE. Nine grades.

Mr. HEFLIN. You think they ought to have two more?

Mr. NEVILLE. I think they ought to have three more. I hope you gentlemen will understand me. If I had my way—in other words, if a committee of planters, manufacturers, and merchants should come and say, "Neville, make a standard of classification," I would embrace every bale of cotton, no matter how varied the quality, and give it a standard. By doing so you take a part of the growth of a commodity out of the junk class and put it where it would have a value. I would go down to the low ordinary. I would take everything up to fair and give it a standard. Cotton is what I am talking about.

Mr. LEE. All these grades are now sold. What are they called when they are sold?

Mr. NEVILLE. You will have to talk to some of your buyers down in your country to get the name of the grade.

Mr. LEE. In other words, the several low grades are dumped into one grade?

Mr. NEVILLE. Yes, sir; and bought as cheaply as they can; and there are times when there is no competition for it. I am here to state facts to you. If it was in my power, I would make a standard for every bale of cotton. You could not get it adopted by any exchange; but if I had the making of it, I would make the standards. A man who produces something ought to have some way of knowing its value.

Mr. TAGGART. Different standards for the consumer?

Mr. NEVILLE. That is a very difficult question to answer, for the reason that the average manufacturer endeavors to buy his stuff as cheap as he can, and there are very few manufacturers who like to use that class of cotton, but when they come down to a pinch they have to use it and they do use it. I have sold in the past week 3,000 bales of cotton from Mr. Heflin's State to one manufacturer. He is one of the largest manufacturers in the world to-day—I would not say the United States, but in the world. I sold him 3,000 bales of cotton; the sample here is white as compared to it. The cotton was blue black in color, yet it had good spinning value, and a staple article.

Mr. HEFLIN. What would be the difference in price to the producer, if any, on this grade and middling cotton?

Mr. NEVILLE. It depends how the differences are fixed. The New York Cotton Exchange has it fixed.

Mr. HEFLIN. How many cents a pound?

Mr. NEVILLE. Two and fifteen one-hundredths cents a pound.

Mr. TAGGART. Would raising the price of these lower grades have the effect of lowering the price on higher grades?

Mr. NEVILLE. I do not think so. That is an argument used by some people who I do not think have studied the subject; but my observation is this, and my experience for a number of years in it is this, that no grade has a tendency to depress the price of the basis in trading, which is middling, unless there is no middling to be had. Then the price will necessarily have to go down. In other words, middling is a basis all the world over. If there is no middling existing, the price of the basis middling is bound to be pulled down by the other grades, and, likewise, if there are no lower grades, and everything is better than basis middling, will depart from the high grades. The average grades of cotton have very little effect on the price of the basis of that grade.

Mr. TAGGART. Will a lower grade of cotton bring a higher price under this classification?

Mr. NEVILLE. It will bring a price more commensurate with its intrinsic value to a spinner than it would if it was not standardized.

Mr. TAGGART. Would not that higher price create a greater demand for it?

Mr. NEVILLE. I do not think it will create a greater demand for it, but it will give the producer the means of ascertaining the value of that particular grade which he has not to-day.

Mr. TAGGART. But that information will give the demand, will be the cause of the demand?

Mr. NEVILLE. That would cause a demand.

Mr. TAGGART. And that will take the place of some other kind of cotton?

Mr. NEVILLE. No; because if you ever had any dealings with cotton manufacturers you would find out that all cotton manufacturers think the only grade of cotton produced throughout the cotton belt is strict middling and good middling. My experience with them for a number of years is that all spinners the world over seem to think there is nothing raised in America in certain seasons of the year but strict middling and good midling, and it is only when they can not

get those grades that they go to the other grades. They do not like to do it, but they have to do it sometimes.

Mr. LEE. Will these different grades be adopted by the New York Cotton Exchange?

Mr. NEVILLE. Mr. Lee, as I said before, I have only one vote; and under my authority and using my authority as president of the exchange, I will certainly work for their adoption, and think it is very reasonable to state that the New York Cotton Exchange would adopt these standards made of upland cotton.

Mr. HEFLIN. You will have different grades with this adoption?

Mr. NEVILLE. Yes, sir; but only such quality and grades as are in use to-day the world over as between the manufacturers and handlers of cotton.

Mr. HAWLEY. What are the grades suggested by you?

Mr. NEVILLE. Fair, middling fair, and an additional grade to be called strict ordinary, to take care of the good ordinary American standard classification adopted in 1874.

IMPROVEMENT OF POST ROADS AND RURAL DELIVERY ROUTES.

THE COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Saturday, January 27, 1912.

The committee this day met, Hon. John Lamb (chairman) presiding.

The CHAIRMAN. Gentleman, this morning we will take up the bill H. R. 16443 for the purpose of hearing Congressman Oldfield on this subject.

STATEMENT OF HON. WILLIAM A. OLDFIELD, A MEMBER OF CONGRESS FROM THE STATE OF ARKANSAS.

Mr. OLDFIELD. Mr. Chairman and gentlemen of the committee, I have prepared a short statement which I will be glad to read to the committee, and then if there are any questions I shall be glad to answer them if I can.

I desire to urge a favorable report from your committee on this bill, which seeks to appropriate, out of the Federal Treasury, $20,000,000 annually, for five years, making a total of $100,000,000, for the purpose of aiding the States in building good roads for the people.

Mr. Chairman, while this legislation would incalculably help every man, woman, and child in this country, yet the persons most benefited would be the American farmers. This bill provides that the money shall be expended under the joint authority of the Director of the Office of Public Roads of the Agricultural Department and the proper officers of the various States. If this bill should pass, and I sincerely trust that it will pass and at this Congress, it will mean that a little more than $400,000 will be allotted annually to each State in the Union for the purpose of aiding in building good roads.

Under this bill each State receiving these benefits must appropriate and expend in road building a sum equal to that received from the Federal Government for like purposes. Of course, in those States where they are not spending annually as much as $400,000 in road building it might work some hardship. However, in this connection I desire to call your attention to the fact that there were only four such States during the year 1911, and those four States, in all probability, will expend a sum for the purpose of constructing roads during the present year that will exceed $400,000.

I desire to submit with my remarks concerning this bill the table following, furnished me by the Director of the Office of Public Roads in the Agricultural Department, which shows the amounts expended

for road building in each of the various States and Territories during the year 1911.

Approximate road expenditures, 1911.

States.	State aid.	Local bond issues.[1]	Local revenues.[2]	Total.
Alabama	$154,000.00	$2,330,000.00	$1,000,000.00	$3,484,000.00
Arizona	150,000.00		175,000.00	325,000.00
Arkansas			2,450,000.00	2,450,000.00
California	[3] 2,067,500.00	1,500,000.00	3,500,000.00	7,067,500.00
Colorado	162,000.00		1,000,000.00	1,162,000.00
Connecticut	[2] 2,000,000.00		2,275,000.00	4,275,000.00
Delaware	30,000.00	300,000.00	100,000.00	430,000.00
Florida		755,000.00	750,000.00	1,505,000.00
Georgia			2,500,000.00	2,500,000.00
Idaho	53,000.00		500,000.00	553,000.00
Illinois	65,000.00		5,000,000.00	5,065,000.00
Indiana			4,500,000.00	4,500,000.00
Iowa			3,500,000.00	3,500,000.00
Kansas	6,500.00	93,356.00	1,500,000.00	1,599,856.00
Kentucky			2,500,000.00	2,500,000.00
Louisiana	132,354.00		1,000,000.00	1,985,419.50
Maine	250,000.00		2,000,000.00	2,250,000.00
Maryland	1,250,000.00		1,000,000.00	2,250,000.00
Massachusetts	1,000,000.00		2,500,000.00	3,500,000.00
Michigan	250,000.00	2,216,000.00	3,500,000.00	5,966,000.00
Minnesota	79,300.00		2,000,000.00	2,079,300.00
Mississippi		1,130,000.00	2,000,000.00	3,130,000.00
Missouri	300,000.00		2,500,000.00	2,800,000.00
Montana			500,000.00	500,000.00
Nebraska			1,000,000.00	1,000,000.00
Nevada			50,000.00	50,000.00
New Hampshire	375,000.00		1,000,000.00	1,375,000.00
New Jersey	500,000.00		4,500,000.00	5,000,000.00
New Mexico	[1] 100,000.00		200,000.00	300,000.00
New York	[1] 5,000,000.00		7,000,000.00	12,000,000.00
North Carolina	5,000.00	2,500,000.00	2,000,000.00	4,505,000.00
North Dakota			1,000,000.00	1,000,000.00
Ohio	600,365.00		6,000,000.00	6,600,365.00
Oklahoma	5,000.00		1,500,000.00	1,505,000.00
Oregon		1,500,000.00	2,000,000.00	3,500,000.00
Pennsylvania	4,000,000.00		7,500,000.00	11,500,000.00
Rhode Island	97,000.00		500,000.00	597,000.00
South Carolina		100,000.00	1,000,000.00	1,100,000.00
South Dakota			500,000.00	500,000.00
Tennessee		1,400,000.00	2,500,000.00	3,900,000.00
Texas		1,600,000.00	6,000,000.00	7,600,000.00
Utah	355,750.00		500,000.00	855,750.00
Vermont	450,000.00		1,000,000.00	1,450,000.00
Virginia	300,000.00	2,454,000.00	1,250,000.00	4,004,000.00
Washington	[1] 900,000.00		2,000,000.00	2,000,000.00
West Virginia		625,000.00	1,000,000.00	1,625,000.00
Wisconsin	390,000.00		3,000,000.00	3,390,000.00
Wyoming	10,000.00		500,000.00	510,000.00
Total	21,037,769.00	18,503,356.00	101,750,000.00	142,144,190.50

[1] Other local bond issues, but information lacking.
[2] Estimated.
[3] Just begun expenditure of $18,000,000 State bond issue for constructing State roads.

This bill provides for the improvement of every road in the country over which the United States mails are carried, with the exception, of course, of railroads and private roads. I believe this expenditure by the Federal Government would, in the long run, be a saving to the Government, by way of decreasing the cost of carrying the mails, as, it goes without saying, it would cost the Government a great deal less to carry the mail over good roads than it would to carry the same over bad roads. Another point I would call your attention to, and that is the fact that it costs the farmers of this country more to haul their produtcs to market than it costs the farmers of nearly any of the other countries. For example, it costs the American farmer 19 cents per ton-mile to haul his hay to market;

20 cents per ton-mile to haul his tobacco to market; 22 cents per ton-mile to haul his wool and potatoes to market; and it costs the cotton farmers of the South 27 cents per ton-mile to haul their cotton to market.

In France it costs the farmers 11½ cents per ton-mile to haul their products to market. In England, 12 cents; in Italy, 9 cents; in Germany, 7 cents; in Belgium, 10 cents. Mr. Chairman, these figures show that it costs the American farmer from 40 to 75 per cent more to haul his products to market than it does the farmers of France, Germany, England, Italy, and Belgium, and this should not be so.

We have about 2,200,000 miles of country roads in this country, and only 10 per cent of these roads have been improved. Let us improve the remaining 90 per cent of them and do it as quickly as possible.

Statistics show that it costs the farmers of this country annually $600,000,000 to haul their products to market over the roads we have to-day; and statistics likewise show that if we had good roads instead of bad ones it would reduce this cost to $300,000,000. In view of these astounding figures, it seems to me that Congress should lose no time in acting on this great question.

Now, gentlemen of the committee, I have made the statement in just as few words as I could. It does seem to me that this is one of the great questions confronting the people at this time, and I do not think there could be a better political move by the Democratic Party than to try in some effective way to assist the States in building roads.

I realize the fact that there are some States that have some good roads, but there are very few States in the Union that have good country roads throughout the entire State. Of course, I realize that objection may be raised to this kind of legislation, owing to the fact that some of the States have good roads and that they have built those roads themselves. I realize that that would be one serious objection. I also realize the fact that those particular States would urge that it would be unfair for them now, after building their own roads, to contribute to the building of roads in other parts of the country.

It seems to me that argument is not well founded, for the reason that there are many States in the Union—take Texas, for example, and I dare say that Texas gets a great deal of money for the purpose of improving the rivers of Texas, wheras, on the other hand, Nebraska gets very little money and likewise Kansas for that purpose. That, it seems to me, is not a good argument. It is almost impossible to parcel out an appropriation on any particular subject so that it will be equalized throughout the various communities of this country. There is no doubt that at least three-fourths or four-fifths of the States of the Union, and especially the farmers of those States, are in favor of this sort of legislation. I get more demands and more requests from my State for good-road legislation than for any other legislation, even more than for the proposition to prohibit gambling in futures and farm products.

I am not a stickler for this particular bill, and although I have given it a good deal of study, I have no pride with regard to the matter, and I do not care about its being called the Oldfield bill or any-

thing of that kind. It seems to me that this committee should take this bill, or some other bill, get up the best bill you can, and report it to the House and secure action.

Mr. TAGGART. Mr. Oldfield, I have not had time to give your bill careful examination. How are the roads to be improved—under the direction of the United States or of the local authorities?

Mr. OLDFIELD. Both; the director of public roads and the proper officers of the State control the money to be expended and select the roads. However, the bill provides that every road over which the mails pass, and the rural routes and post roads, must have the benefit of this appropriation.

The CHAIRMAN. Do you confine it to post roads?

Mr. OLDFIELD. And rural free delivery routes.

Mr. BEALL. Is it proposed that each rural route each year shall receive its proportionate share?

Mr. OLDFIELD. Provided it puts up its proportionate share.

Mr. BEALL. Have you figured what a single particular rural route would receive?

Mr. OLDFIELD. It would be about $400,000 to each State. One of the best features of the bill is that it permits the Director of Public Roads of the United States Government to be a party to the construction of these roads. Every member of this committee knows that there are few people in the various States who know how to construct good roads and how to properly distribute any funds. Now, then, these gentlemen here in the Good Roads Department have given this subject a great deal of scientific study and the very fact that the work will be done under the supervision of the Director of Public Roads and the proper officers in the States, and each State will have to appoint a proper officer, that alone will be worth as much as the money expended. Of course, $400,000 on a road way back 100 miles from the State capital would not amount to very much, but it would amount to a great deal in the advice and also the money expended, the fact that they must put up a like sum.

The CHAIRMAN. You divide it between the States?

Mr. OLDFIELD. It would be divided according to the population. I provide for leaving out all cities of 100,000 or more. I worked on it and figured on it and felt that that would about equally distribute the money.

The CHAIRMAN. What would be the difference between the amount given to your State and to New York State?

Mr. OLDFIELD. I do not think there would be such a great difference after cutting out the cities of 100,000. By cutting out New York and all the cities of 100,000 that would equalize it pretty well.

Mr. MAGUIRE. Do you not think that will permit a large part of the fund to go into some States which are densely populated?

Mr. OLDFIELD. Probably, and they are probably entitled to more. The more densely settled the community is the more they are entitled to, just the same as you appropriate money for the rivers in the eastern part of the country; where the population is sufficient to create the traffic on the rivers, you appropriate more money; it is just like building up the country.

Mr. MAGUIRE. Is it your idea to ultimately issue bonds for $100,000,000?

Mr. OLDFIELD. I would, if necessary. The Government of the United States has issued bonds for a great many less appropriate things.

The CHAIRMAN. That is the only way you are going to reach this question?

Mr. OLDFIELD. If it is necessary I would do so; yes, sir.

Mr. LEE. How much do you ask for?

Mr. OLDFIELD. $100,000,000, $20,000,000 annually.

Mr. LEE. You would not need to issue bonds?

Mr. OLDFIELD. I do not think so.

Mr. BEALL. How much would it cost to build the most of the roads?

Mr. OLDFIELD. I have not made an estimate. I do not think it would cost as much as the improving of the rivers, and I think it is infinitely more important.

Mr. TAGGART. I do not wish to trespass on the patience of the committee, inasmuch as I am a new member, but I had the honor of being the prosecuting attorney in the county in which I live for the past five years, and in that county, Wyandotte County, the smallest in area and the greatest in population in the State, there is not a city of 100,000, and we did more road building than any other county in the State or any similar area in the West, and I will state that the cost of building a rock road 16 feet wide and, say, 10 inches deep in the middle and 5 inches at the edge, well rolled down, and made of rough rock—a layer of roughly broken rock on the bottom and finished with a top finish of finely ground rock—is worth $1 a foot.

Mr. HAWLEY. A macadam road?

Mr. TAGGART. Yes, sir; and it can not be built for any less than that even in our county, where labor is the ordinary price and where the material is abundant and the haul is not very great.

Mr. LEVER. What does it cost a mile?

Mr. TAGGART. $5,280 a mile, there being that many feet in a mile. The great expense is in hauling the material.

Mr. PLUMLEY. A road 16 feet wide?

Mr. TAGGART. Sixteen feet wide. Our system, of course, is like every other system, on competitive bids, and those bids have run all the way from 48 cents a square yard up to 70 cents a square yard for that kind of work. The expense is tremendous, and I suggest that $400,000 apportioned to each State would build 80 miles of road, and if the State should add as much it would build 160 miles of road.

Mr. BEALL. A year?

Mr. TAGGART. Yes, sir. Our State has 105 counties and 185 miles——

Mr. OLDFIELD (interposing). I would not object to making it $100,000,000 annually.

Mr. TAGGART. That would be 1.5 miles of road for each county for each year. I have no criticism to offer of this bill. I regard it as a stimulus to road building, as a beginning whereby the people might become interested. I have also a bill pending in which I do not take any particular personal pride, nor am I urging myself upon the attention of the committee, but it is founded pery much on the same idea that Mr. Oldfield's bill is, although I did not have the pleasure of reading Mr. Oldfield's bill before I drew mine. It provides that 2

per cent of the cost annually shall be given to any county or municipality that will build as much as 10 miles of road. Let them issue the bonds and use the 2 per cent of the cost as a sinking fund to pay the bonds. That would give the local people authority to select what road they intended to improve, and having improved it and provided for paying for the improvement of it, the Government would then give them 2 per cent of the cost of the improvement for a period of 20 years. I am not urging that, however. I am here to urge a good-roads bill, because the people of the Middle West are intensely interested in it.

Mr. HAUGEN. The rate you speak of is in a locality where the rock can be easily secured?

Mr. TAGGART. That would be an average haul of 1½ miles.

Mr. HAUGEN. You are aware of the fact that in many parts of the country the haul is much longer and that the average cost is from $7,000 to $10,000 a mile for that kind of a road. In New York it cost about $7,500 and in New Jersey, I think, it cost more than $7,000.

Mr. TAGGART. There are beds of gravel and material for road building in many places, as I was informed by the gentleman from Mississippi, Mr. Candler, in pasing through his State. I inquired if it were possible to secure rock conveniently with which to build roads, and he said that there were immense beds of gravel. Beds of gravel may be found in many places.

Mr. HAUGEN. You have had experience in road building and along that line in your State. Is it not a fact that a clay and gravel road for nine months in the year is the best road of the two?

Mr. TAGGART. I would not say so, although I do not wish to discuss clay and gravel roads because we do not have them. Ours are rock macadam roads. We even find that it pays to oil the roads in order to keep them from grinding up and blowing away. It does not cost much more to maintain them than a dirt road.

Mr. OLDFIELD. This may seem to be a large sum to the members of the committee and also it may seem to be a small sum, but I call the committee's attention to the fact that while this particular legislation is new, yet this sort of legislation is not new in this country, as the Congress of the United States has given to the railroad companies 115,000,000 acres of land with which to build railroads. The people of the country who have homesteaded lands have only homesteaded 113,000,000 acres.

In other words, the Government of the United States helped to build the railroads of this country for the railroad companies and the men who own them. They have been given as much land as there is in half a dozen large States, and they are given the timber for 25 miles on either side of the right of way for the purpose of constructing the roads, making crossties, trestles, etc., and 20 acres of land every 10 miles on which to build depots, sidetrack, etc. All of those subsidies have gone to the railroad companies. It does seem to me that the time has come when the Congress of the United States might give to the people of this country, to the men who use the wagon roads, the dirt roads, some sort of consideration, and if you should give them five times or even ten times the amount included in this bill, you would not give them half as much as the railroads have secured from the Congress of the United States.

I am very serious about this matter and hope that some sort of legislation will be worked out. To-day the dirt roads of this country are much more important to all the people of the country than even the railroads, especially since we have so many railroads. The great question now for the producer is to get his produce to the railroads and to the boat landings. You have helped to improve the rivers and build the railroads, not you gentlemen, but the Congress of the United States, and it does seem to me that the Congress of the United States might help the men who produce to build their roads so they can get their products to the market and reduce the cost at least 50 per cent. I believe that is all I care to say now.

Mr. Chairman and gentleman of the committee, I have another bill pending before your commitee in which I am deeply interested. This bill is H. R. 18779, to prohibit gambling in futures in all kinds of farm products. This bill is very similar to the bill known as the Scott bill, of the Sixty-first Congress, and which passed the House by an overwhelming vote, but died in the Senate. However, there is this difference in this bill and the Scott bill. My bill prohibits gambling in futures in all farm products, whereas the Scott bill prohibited gambling in futures only in cotton. You are all familiar with this proposed legislation; hence, there is no necessity of my making a lengthy argument in favor of this bill. I am sure there are not many Members of the lower House of Congress who oppose this kind of legislation. Hence, it seems to me that it would be wise to report out this bill or some similar bill as soon as possible and start it on the road to final passage in both Houses. I believe public sentiment will force the Senate to pass this bill now, if the House will but pass it.

Thereupon the committee proceeded to the consideration of executive business, after which it adjourned.

IOWA BOYS' AND GIRLS' CORN CLUBS.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Saturday, February 3, 1912.

The committee this day met, Hon. John Lamb (chairman) presiding.

The CHAIRMAN. Mr. Haugen, will you please take charge of these young farmers and their chaperons and introduce them as you feel inclined?

STATEMENT OF HON. GILBERT N. HAUGEN, A MEMBER OF CONGRESS FROM THE STATE OF IOWA.

Mr. HAUGEN. Mr. Chairman, gentlemen of the committee: I have the honor and pleasure of introducing to you a number of ladies and gentlemen, a number of boys and girls of Iowa. These young men and young women are winners of the Washington trip in the acre corn-growing contest and the bread-making contest of Iowa. Inasmuch as it is the aim and function of this committee to promote agriculture and to recommend appropriations to further agricultural interests in general, it occurred to the members of the Iowa delegation that it might be proper to ask the committee that these people be given a hearing. I am sure that I voice the sentiment of every member in this great committee when I say that we are pleased to meet you and to congratulate all of you upon your splendid achievement. This committee recommends large appropriations for demonstration work and farm management every year. We are pleased to know the States and individuals are taking such an interest in this line of work. Through your efforts, skill, intelligence, and industry you have demonstrated to your neighbors and the people of this country what Mother Earth will produce when labor is intelligently applied, and which will encourage more men and women to take up the occupation of farming and live a life so dignified, commendable, independent, and conducive to health and prosperity and will check the tendency to leave the farm and go to the cities, where fewer opportunities are offered and where more temptations and disappointments are encountered than on the farm.

This committee is a busy committee. You are here to see Washington; hence I will not take up more time, except to say that this achievement will inspire you to do even better next year and to pursue this honorable and dignified occupation with intelligence, industry, and perseverance, as you have started out. I extend to each and all of you my hearty congratulations.

IOWA BOYS' AND GIRLS' CLUBS, 1911.

WINNERS OF THE WASHINGTON TRIPS IN THE ACRE CORN-GROWING CONTEST AND THE BREAD-BAKING CONTEST.

Sweepstakes, State wide:
Lester Finch, Fairbank, Buchanan County.
Score, 93.47 per cent; bushels, 99.67; production cost per bushel, 11 cents.
Donor of Washington trip, Congressman Charles E. Pickett.

Third congressional district:
Vivian Edwards, Clarksville, Butler County.
Score, 93.05 per cent; bushels, 97.17; production cost per bushel, 14⅜ cents.
Donor of Washington trip, Congressman Charles E. Pickett.

Fourth congressional district:
Harry E. La Ville, Postville, Fayette County.
Score, 89.58 per cent; bushels, 96. production cost per bushel, 12½ cents.
Donor of Washington trip, Congressman Gilbert N. Haugen.

Sixth congressional district:
David Jones, New Sharon, Poweshiek County.
Score, 81.47 per cent; bushels, 81.32; production cost per bushel, 28⅛ cents.
Donor of Washington trip, Congressman Nathan E. Kendall.

Seventh congressional district:
Charles Whitehouse, Granger, Polk County.
Score, 85.28 per cent; bushels, 86.22; production cost per bushel, 24 cents.
Donor of Washington trip, Congressman Solomon F. Prouty.

Eighth congressional district:
Glen Mead, Percival, Fremont County.
Score, 92.01 per cent; bushels, 97.66; production cost per bushel, 18¾ cents.
Donor of Washington trip, Congressman Horace M. Towner.

Tenth congressional district:
Ivyl E. Naylor, Stratford, Hamilton County.
Score, 79.19 per cent; bushels, 75.55; production cost per bushel, 21½ cents.
Second prize, Railway and Pullman tickets, round trip:
Lewis Heim, Rutland, Humboldt County.
Donor of Washington trip, Congressman Frank P. Woods.

Eleventh congressional district:
Clarence L. Brown, Salix, Woodbury County.
Score, 90.58 per cent; bushels, 84.69; production cost per bushel, 21 cents.
Donor of Washington trip, Congressman Elbert H. Hubbard.

Pottawattamie County:
Arthur Strohbehn, Treynor, Pottawattamie County.
Score, 74.30 per cent; bushels, 60.01; production cost per bushel, 21 cents.
Donor of Washington trip, citizens of Pottawattamie County.

BREAD-BAKING CONTEST.

Sweepstakes, State wide, bread; baked at Ames Junior Short course, January 11, 1912:
Miss Lois Edmonds, Clarinda, Page County.
Score, 93 per cent.
Donor of Washington trip, Successful Farming.

The mothers of the two sweepstakes winners wll accompany the party at the expense of the Wm. Galloway Co., Waterloo, Iowa.

The score for selecting winners was based upon the following items:

	Per cent.
Yield of credit bushels	40
Quality as shown by exhibit of best 10 ears	20
Written account telling history of growing crop	20
Production cost per bushel	20
Total	100

The credit bushels were ascertained by a moisture and shelled-corn test of a sample peck of corn submitted by the acre-yield committee of each contestant to the State college of agriculture at Ames. The credit bushels in each case represent the value of shelled, air-dried corn.

Prof. Bishop, of the Iowa State College, who has had charge of this work in the State of Iowa, who is now accompanying the party on the trip, is a gentleman who has had much experience, and whom I know you would like to hear from, and, with the permission of the committee, I will call upon Prof. Bishop to address the committee.

The CHAIRMAN. We will be glad to hear from Mr. Bishop. I indorse all that my colleague has said and welcome these young women and boys.

STATEMENT OF MR. E. C. BISHOP, IN CHARGE OF THE SCHOOLS SECTION OF THE EXTENSION DEPARTMENT, STATE AGRICULTURAL COLLEGE, IOWA, AND DIRECTOR OF THE IOWA BOYS' AND GIRLS' WORK.

Mr. BISHOP. Mr. Chairman and members of the committee, we appreciate this opportunity to appear before your committee, and also the fact that you have an interest in us. It will help to cement the connection which exists now so strongly between agriculture and education. There has not always been a recognition in educational circles that agriculture meant education, and also among agriculturists that education has a great deal to do with their work and business.

The presence of this party on this occasion is one of the indications that there has been a recognition of some new values in education and that there are some new recognized values in agriculture. It is the getting of the two together that is resulting so strongly just now in the advancement in agricultural interests and also in the advancement of school interests.

One of the great crimes, if there be such, of the public-school educational systems is that so small a percentage of the boys and girls attending our schools, especially in our rural schools, get beyond the eighth grade. They do not do this because they have not had awakened within them the right educational impulse. The great educational problem of this country is the rural-school problem—that of getting the proper kind and degree of education to the people in the country communities. In introducing the subject of agriculture in the public schools we have met with some opposition, a great deal of it from the very people who are to be most benefited by it. They were taught that it was not worth while to depart from the traditional idea that the old-time (so considered) essential academic studies were the only things that should be concerned in public-school education.

Some of our people have been slow to appreciate the fact that education which finds expression in the home life and in the business and social life is the most effective education, and that the values which come through education in the things in which the home life are most concerned must become a part of the public educational system. We have had to adopt some unusual methods in calling the attention of the administrators of education to the fact that some of these best things are worth while.

We can not successfully legislate education into any community; we can not legislate education into a school board; and we can not effectively legislate education into a school district. We can legis-

late it into teachers so far as to require them to have certificates which demand qualifications of a certain kind. But we can not successfully establish any new feature in any public-school system effectively until we have created a desire for the thing which is to be put in.

There is a great deal of democracy in the public-school systems in the various States. We have not provision for all the education that we need and for some of the things which we need most. These boys' corn clubs and these girls' cooking clubs emphasize some conditions which need attention. They call attention to a phase of education which we believe is worth while, yet which has not been provided for except in a comparatively few progressive communities. Good education should be universally provided for throughout the entire country. Even in up-to-date communities in other matters there is a tendency to cling to old customs in education, though they be out of date and poorly applied to modern living. While we find we can interest a comparatively few of the grown-ups in these newer things, we can interest the younger element. They have no traditional ideas to cobweb their judgments. They see life as it is now, not as it was 50 years ago. We have found that we must begin with the young people first, and that we must begin in the right way. We must give them something to do in the doing of which they find it necessary to exercise the intellect as well as the hand. It then becomes a real part of their education. So the corn clubs, the bread-baking clubs, the vegetable and fruit canning clubs, the sewing and gardening clubs, the poultry and alfalfa clubs—all these organizations create an educational interest among the young people in this particular work, and through them we have the interest of teachers, parents, and school administrators.

Some of the old-line type of teachers have thought that they have too much else to do, too much routine work to give attention to the things which vitalize all school work. We have had to create an interest, a desire, and a demand for this kind of education which has to do with the life interest of the child. We have had to demonstrate to teachers and to parents the fact that well-directed instruction and practice in home interest, coming in an educational way, cause the child to become a better student of language, of mathematics, of science, and of history, because he then has some known measure by which he may value other things. This interest in live, everyday problems brings interest to the academic work in the school, no matter whether it be rural school, high school, normal school, college, or university. It so intensifies the desire for knowing usable things that the student reaches out for an education instead of shunning it. Through correlation of this work pupils become better students in all the other subjects they study, and the community shares in the benefits which come from applied education.

In our first work of this kind we asked the boys to grow some pure-bred corn. They responded in large numbers. The education interest and effect was immediately felt. The girls demanded attention. We started the bread-baking work, the sewing work, and the vegetable and fruit canning work. In every school where one of these boys was raising an acre of pure-bred corn or a girl was doing some of the home-economics work, the school-teacher observed the effect on the

child, the home, and the school, and encouraged others to take up the work. Thus the club membership grew from a few to thousands of members and has resulted in the incorporation in courses of study in rural and high schools of elementary agriculture and home economics.

In the acre contest the young men were asked to set aside an acre or more of good land. They were to use the best kind of seed; the seed which they knew would grow. They raised their crop according to their own plans and by their own work. The result of their work last year brought these boys here to-day. In this whole work the young man has been teaching himself to depend upon himself for results.

In the school district where these young men have been working, and in their communities, it has brought improvement to the educational life and ideals of the community and better farm and home practices. Why should not all the children in all the communities have the same advantage? The response has come in action which has put into the courses of study in many States the work of elementary agriculture and home economics as a part of the public-school curriculum.

We are most concerned in the work of the rural schools because they are the ones most neglected. The rural schools too often choose the most inefficient of the teachers instead of demanding and paying for the best. The rural ungraded school with its shorter term, irregularity of attendance, lack of direct supervision, and inadequate equipment needs a stronger teacher than the classified, well-supervised school of the city.

The city school is taught by teachers familiar with the conditions and interests of the city homes from which the pupils come. Too many rural schools are taught by teachers who are entirely unfamiliar with even the principles upon which the work in an agricultural community is carried on. These teachers have had no opportunity to make a study of these things which they need to know.

We expect these young people here and the thousands of their companions whom they have left at home to lead their teachers next year, in some phases of their work, in their school in agriculture and the arts of living in the home. In this way, while our teachers are preparing for the work, these boys and girls are the teachers of agriculture. By their work and knowledge of application they teach their teachers who, in turn, pass the inspiration and information on.

The best teachers in the rural schools are those trained for it. Too many rural-school teachers have had no training for teaching in a rural community or any other community. The cities and towns, by paying better wages and offering better facilities for successful work, bid for and secure the greater number of teachers trained by normal schools. Rural-school teachers come largely from the high schools of town and city. We must have more high schools offering courses of study in normal training, with special provision for training for rural-school work.

Last year in Iowa we had enrolled in club work over 14,000 boys and girls, of which these present are good samples. The year before there were 7,000, and the year before that 500. Next year, if we have the means to carry the work on, we could have 100,000 members. The problem with us is quite similar to that in some other States.

We are ready now to do things in agriculture from an educational basis. State legislatures are awakening and responding to some extent. Yet they can not respond in a degree which will enable us to provide all that is needed. We have 28,000 school-teachers in Iowa. Until very recently there has been no place where any of those teachers could get a knowledge of the elements of agriculture at public expense. We need encouragement and assistance such as is proposed in the Page bill.

You are more familiar than I am with the bills now before Congress which provide for encouraging and helping the States to make provision for the training of teachers in agriculture, home economics, and manual-training work.

There is one thing I should say to the Agricultural Committee, and that is that some things your committee have done have helped very much. They have emphasized the fact that Congress is interested in Iowa, in Wyoming, in Florida, and in all the States, and that every State is to be encouraged to its best work in education. The efforts of the States have been greatly encouraged by every assistance which Congress has been able to give them. Your message has seemed to be: "We are willing to help you a little in this good work. Now go ahead and help yourselves a great deal." Our people are ready to respond to such encouragement.

I am especially interested in one little bill that has been recently noted in our State papers which provides for the utilization of cornstalks. This may seem to some not interested especially in educational work to be of little importance. But I find that those movements which take the by-products that are ordinarily of little value and make a profitable use of them have an educational value as well as an economic value. I remember when I was a boy the paper mill up in Floyd County, Iowa, used to take the waste straw. I learned that it paid to save the straw even though it brought little more than enough to pay for the work of hauling it to the paper mill. The principle of utilizing materials was worth more to me than the value of the straw to my father.

I want to mention here the conditions upon which these boys won their trips to Washington. It was not the greatest number of bushels they could raise; it was the greatest number of bushels they could raise at a profit. It was not to grow any kind of corn they could; it was to raise the greatest number of bushels of corn of good quality.

The CHAIRMAN. Have you a statement of that?

Mr. BISHOP. Yes, sir.

The CHAIRMAN. Please leave it with the committee.

Mr. BISHOP. I shall do so.

The CHAIRMAN. Would these boys like to tell us how they did this work?

Mr. BISHOP. I shall call on some of them to do so.

They were scored on the basis of 100 per cent, and the yield was determined by the number of pounds of air-dried shelled corn they raised on the acre. The "credit bushels" were ascertained by a moisture and shelled-corn test of a sample peck of corn submitted by the acre-yield committee. The statement which I will file, with your permission, concerning each boy shows what it cost him per bushel,

the number of credit bushels, and a number of things connected with that particular part of the work.

Mr. HAUGEN. Does that include the names of the boys?

Mr. BISHOP. I will attach to this a statement which gives the names of all the boys and the relation of each to this particular matter.

Mr. TOWNER. I would suggest, Mr. Bishop, that the statement the chairman has referred to be given to the reporter and marked as an exhibit, so that it will be printed in the proceedings.

The CHAIRMAN. That will be done.

Mr. TOWNER. And also the statement made regarding what might be called the official test as to the individual boys.

Mr. BISHOP. Yes, sir.

Mr. TOWNER. You will give that to the reporter?

Mr. BISHOP. Yes, sir.

Mr. MCDERMOTT. Do you also desire to insert the names of the other boys who did not come?

Mr. BISHOP. There are 2,200 boys who participated in the acre contest. I could furnish the complete list if it is desired.

Mr. MCDERMOTT. Whatever you desire can go into the record.

Mr. BISHOP. I will make a written statement of the things which I wish to leave here. I think this covers all the matters in which you will be especially interested.

Mr. PICKETT. I would like to inquire whether you will include the names of the boys who are here on the trip at their own or the expense of other people other than the members of the delegation?

Mr. BISHOP. I have a statement showing by what authority and provision each boy is here. I shall file this.

Mr. TOWNER. I would like to ask if you have a statement also regarding the bread contest in which Miss Lois Edmonds participated?

Mr. BISHOP. I can give you that. I do not have it here in writing.

Mr. TOWNER. I would like to have it made a matter of record.

Mr. BISHOP. We think a good deal of the method by which this young lady won the privilege of coming with us. She represents one of about 6,000 girls under 18 years of age who took the Iowa girls' club course in bread making provided by the agricultural college at Ames. In the final test conducted at Ames January 13 this young lady, Miss Edmonds [indicating] won first place.

The CHAIRMAN. We shall be very glad to hear from her.

Mr. TOWNER. Can you not tell the committee a little more about the manner in which the bread contest was carried on? For instance, as I understand it, Miss Lois Edmonds was put in a laboratory at Ames, where she was compelled to go through all the process under observation, and that she took with her her own flour that was raised in Page County and everything that was required for the purpose of making the contest, so that it was all a home product of Page County in this particular case. I think if you can give the committee the details of the manner in which that was carried on, it will probably be of interest to them and to others.

Mr. BISHOP. You have mentioned them principally. This young lady brought the flour from her home and followed her own recipe. There were three judges in the bread-making contest. They checked her up on cleanliness, quickness, neatness, and other points connected with the making of the bread. She made two loaves of bread and

was allowed then to choose the better of the two. This loaf was submitted to the three judges, each of whom passed on it separately, not knowing whose bread it was, each loaf entered being designated by a number. Each judge scored each loaf of bread. This young lady received the highest average score in the making, the baking, and the finished product.

Mr. TOWNER. Does the statement show her age?

Mr. BISHOP. She was 12 years of age last December.

Mr. HAUGEN. I would like to introduce the young woman, Miss Lois Edmonds, who won the first prize. [Applause.]

The CHAIRMAN. We would like to hear from you, little lady. Please tell us how you made that bread. You need not feel abashed. The people here are just like the people at home. You have an audience of your own people. The boys, you know them.

Mr. BISHOP. Lois, will you please tell the committee just how you did the work?

STATEMENT OF MISS LOIS EDMONDS, OF CLARINDA, IOWA.

Miss EDMONDS. The things were all there in the laboratory. All we had to do was to get them out and mix them there. We had to do it all ourselves. There was a lady there who watched to see how we did it. We had to make the bread and put it in the oven and then wait until it was done. Nobody was allowed to tell us anything.

The CHAIRMAN. You were taught at home?

Miss EDMONDS. Yes, sir.

The CHAIRMAN. You learned more at home than in the laboratory?

Miss EDMONDS. Yes, sir.

Mr. BISHOP. Tell us how you happened to get interested in the contest?

Miss EDMONDS. We had a corn show in our county, and the superintendent, Miss Fields, asked me, and I made bread for them and took second prize. She wanted me to make bread for the Ames contest. I made bread and sent it away and I took first prize, so she wrote and asked me to come to Ames and make bread there. I went to Ames and made bread there and took first prize.

Mr. BISHOP. Did your teacher encourage you any in this?

Miss EDMONDS. It was just between Miss Fields and my mother.

Mr. BISHOP. Did not your teacher take any interest in it?

Miss EDMONDS. No, sir.

Mr. BISHOP. Did she herself know anything about cooking?

Miss EDMONDS. I can not tell you.

Mr. LEVER. She never took the first prize for making bread.

Mr. MAGUIRE. Do you attend the city or country school?

Miss EDMONDS. The country school.

Mr. MAGUIRE. In what grade?

Miss EDMONDS. In the sixth grade.

The CHAIRMAN. We are very much obliged to you. Glad to have heard you.

Mr. MCDERMOTT. Do you not think that you should tell us how you baked this good bread, so that we could instruct the bakers around Washington who feed the Congressmen?

Mr. HAUGEN. We have with us Mr. Pickett and Judge Towner.

STATEMENT OF HON. CHARLES E. PICKETT, A MEMBER OF CONGRESS FROM THE STATE OF IOWA.

Mr. PICKETT. This is the first year we have had this contest in Iowa. It certainly has been quite a success for the first year. Its value, however, depends on its growth and expansion in the future. I think the suggestion really came from the clubs in the Southern States and we hope to be as successful in Iowa as they have been in the Southern States in promoting these contests.

Now, it has occurred to me that perhaps it would be an advisable and wise thing to have a number of copies of these hearings printed so that each of the participants in this contest can have one and so they can be distributed among the boys and girls in Iowa who will like to know of this in the future and perhaps be circulated in some of the other Northern States, which perhaps would like to follow the example set in Iowa, and I would like to suggest that that order be made by the committee. I do not suppose it would be proper for me to make the motion, because I am not a member of the committee.

Mr. MCDERMOTT. I will make the motion.

The CHAIRMAN. I will say to the gentleman that that will be done, but there is a limit beyond which we can not go, particularly in these times of economy.

Mr. PICKETT. I think it would be a good idea so that each of the boys could have a certain number, and also those interested could be supplied with copies.

The CHAIRMAN. I will be glad to do that.

Mr. PICKETT. I would like to inquire whether the names of the other donors of the prizes have been inserted in the record?

Mr. BISHOP. Yes, sir; they have.

Mr. BENSON. I believe that in the hearing I would like to have these questions asked: The kind of corn grown by the boys, when the ground was plowed and how deep, and how many times it was cultivated.

Mr. TOWNER. As I understand, this will be printed in the memorandum; it is not in the typewritten copy.

Mr. BISHOP. Yes, sir.

The CHAIRMAN. On behalf of the committee I would like to say that any courtesy extended to the southern boys these Iowa boys shall enjoy in like measure, without question, and we are just as glad to see the Iowa boys as to see the others. This committee knows no North, no South, East, or West.

STATEMENT OF HON. H. M. TOWNER, A MEMBER OF CONGRESS FROM THE STATE OF IOWA.

Mr. TOWNER. Mr. Chairman and gentlemen of the committee, I am very sure that the Members of Congress who know the chairman and members of this committee will agree that that is entirely, absolutely, and unreservedly true. I am very sure also that the boys and girls who are here from Iowa appreciate very much the reception that has been given them here in Washington and with the interest that has been manifested in their work. It is, of course, quite important that this work should be encouraged. Twenty-two hundred boys in Iowa entered this contest this year. If they feel that their

work is not appreciated and that there is no general interest in such work, there will be a less number next year instead of a greater number. We not only want to encourage a greater number entering into the active contest next year, but we hope that it will extend to every State in the Union, so that some of the great problems of food production may reach at least a measure of solution by the increased production of our own farms. We believe in Iowa that we can easily more than double the average production of corn in that State. It already is the first State in the Union in the production of corn, and I presume it may be done in other crops as well. We believe that in America we have the capacity, both of soil and those who till the soil, to furnish all the food products that this Nation shall need, not only for their own people but for a large export as well.

Mr. McLAUGHLIN. You do not believe in throwing down the bars and letting the stuff from Canada come in?

Mr. TOWNER. I do not.

Mr. McLAUGHLIN. Then, we agree.

Mr. TOWNER. I believe that it would be a much better Government policy for us to encourage, as we are now trying to do, a greater yielding of our own acreage than to invite the competition of the cheaper acreage that may be under an alien flag, and so we are very glad indeed, those of us who are Congressmen from Iowa, to assist and encourage this work among our own people. I am very glad indeed to note the chairman's statement that in the encouragement which shall be given there will be no North, South, East, or West, but that the United States as a Nation looks after the interests of all the people of the country and of all the boys and of all the girls.

Mr. BISHOP. Do you care to hear from any of the boys?

The CHAIRMAN. Yes, sir.

Mr. BISHOP. I will call on Mr. Naylor, of Hamilton County.

STATEMENT OF MR. I. E. NAYLOR, OF STRATFORD, IOWA.

Mr. NAYLOR. I heard of this in the spring and plowed my ground 6 or 7 inches deep in a sort of slough. I thought that would be a pretty good place. I worked the land three or four times in the spring and sowed my corn.

The CHAIRMAN. Did you sow it or plant it?

Mr. NAYLOR. I planted it.

The CHAIRMAN. How far apart?

Mr. NAYLOR. Three and one-half feet each way.

The CHAIRMAN. How many stalks?

Mr. NAYLOR. Oh, I had some two and three in a hill. It was cultivated four times.

Mr. HAUGEN. Each way or one way?

Mr. NAYLOR. Two times each way.

Mr. HAUGEN. Deep or shallow?

Mr. NAYLOR. Pretty shallow.

Mr. BISHOP. Deep or shallow the first time?

Mr. NAYLOR. Deep; and then after that I cultivated pretty shallow.

Mr. BISHOP. Did you use any fertilizer?

Mr. NAYLOR. No, sir.

Mr. MAGUIRE. Did you do the plowing and all the work yourself?

Mr. NAYLOR. Yes, sir.

The CHAIRMAN. How many acres?
Mr. NAYLOR. Forty acres.
Mr. WICKLIFFE. What time of the year did you plant?
Mr. NAYLOR. The 10th of May.
The CHAIRMAN. Did you work 40 acres yourself?
Mr. NAYLOR. Yes, sir; I worked it on my brother's farm. I worked for my brother the year before.
The CHAIRMAN. How much did you get to the acre?
Mr. NAYLOR. 75.55 bushels.
Mr. BEALL. What kind of corn did you plant?
Mr. NAYLOR. Reid's Yellow Dent.
Mr. BISHOP. I would like to hear from Glen Mead, of Freemont County.

STATEMENT OF MR. GLEN MEAD, PERCIVAL, IOWA.

Mr. MEAD. Our teacher wanted the boys to join the contest, first in February. Eight went in. The rest of them all backed out except me. I plowed the ground 5 inches deep in the spring, and listed in rows 3 feet and 6 inches apart and 3 inches deep. The first cultivation was completed on the 20th of May. The first cultivation was rather shallow and I threw the dirt away from the corn, but the next time I threw the dirt around the corn, and the third time I plowed rather shallow.
Mr. LEVER. How deep did you plow it?
Mr. MEAD. About 6 inches the second time.
Mr. BISHOP. How many bushels did you get to your credit?
Mr. MEAD. 97.66 bushels.
Mr. BEALL. What kind of corn did you plant?
Mr. MEAD. Shenandoah Yellow.
Mr. MCLAUGHLIN. The amount you produced, is that shelled corn?
Mr. MEAD. Ear corn.
Mr. MCLAUGHLIN. Ninety-seven ears?
Mr. MEAD. That was the weight of the corn.
Mr. BISHOP. It was the air-dried shelled corn value.
Mr. BENSON. Fifty-six pounds to the bushel?
Mr. BISHOP. Yes, sir. We gave it the regular moisture and shelled corn test.
Mr. MCLAUGHLIN. Do you know whether or not that is the same standard as applied in the South, in South Carolina, where a boy a year ago produced 227 bushels to the acre?
Mr. BISHOP. I am not acquainted with the conditions applied in that particular case.
Mr. BENSON. I am from the Department of Agriculture and I have charge of that work. The test there is 56 pounds of shelled corn to the bushel. That is air dried, allowing 56 pounds in weight.
Mr. MCLAUGHLIN. Do you know what the test was in Iowa, and are you able to say whether there was any difference between the two weighings of measured corn?
Mr. BENSON. Just a slight difference; nothing to speak of.
Mr. HAUGEN. The fact is that this year corn contains a large percentage of moisture and they made a deduction for that?
Mr. BISHOP. Yes, sir.

Mr. HAUGEN. Can you give us the percentage of moisture the corn generally contained?

Mr. BISHOP. I have not that data with me, but can produce it.

Mr. HAUGEN. Can you give the average for this year, in Iowa?

Mr. BISHOP. No, sir; not the exact amount of moisture.

Mr. HAUGEN. Mr. La Velle, I find that you were second in production cost and that you produced 89 bushels at 12½ cents per bushel. Can you tell us how that was done?

STATEMENT OF MR. HARRY A. LA VELLE, POSTVILLE, IOWA.

Mr. LA VELLE. I plowed the ground in the fall. It had been pastured for several years. I planted on the 16th of May. The rows were 3 feet 6 inches apart and it was double checked and plowed four times.

Mr. MCLAUGHLIN. Plowed or cultivated?

Mr. LA VELLE. Cultivated.

Mr. HAUGEN. It was drilled?

Mr. LA VELLE. No; double checked. I cultivated it deep the first time and threw the dirt away from the hills, and shallow the last time, cultivating level.

Mr. HAUGEN. Did you use any fertilizer?

Mr. LA VELLE. No, sir.

Mr. MCLAUGHLIN. You say that you did not use any fertilizer? Did you use any barnyard manure?

Mr. LA VELLE. No, sir.

Mr. BISHOP. Do you remember what the production cost per bushel was?

Mr. LA VELLE. Twelve and one-half cents.

Mr. WICKLIFFE. I would like to inquire if these boys did their cultivating and plowing?

Mr. BISHOP. Yes, sir. That was their directions. I wish to say that only in three cases did these boys use any fertilizer, and none used commercial fertilizers, and that they had no assistance from the State or Government.

The CHAIRMAN. I always understood that Iowa's soil did not need any fertilizer.

Mr. BISHOP. We think it does not.

Mr. TOWNER. Mr. Bishop, will you also please make a suggestion regarding the climatic conditions in Iowa this last year? I think we never had as dry climatic conditions in Iowa as we have had during the past season—at least in a large part of the State.

Mr. BISHOP. In some places the corn crop practically failed on account of the climatic conditions this year, yet by the use of the good methods our boys' club members secured better results than the average. The whole record shows that, regardless of the drought and other unfavorable climatic conditions this year, good things were done. While we should not expect to equal the maximum yield of the South, with its long season, yet we do believe that, by reason of what we have accomplished so far, with our good soil we can more than double the average acre yield of corn in Iowa. We do not expect to raise 227 bushels to the acre as a general proposition, but we can raise a high-yielding crop at a good profit without the application of commercial fertilizers. Every county is a good corn section.

The CHAIRMAN. We thought Iowa was one big cornfield.

Mr. BISHOP. It is.

Mr. WICKLIFFE. Do you utilize the cornstalks?

Mr. BISHOP. Under the present conditions they are used for fodder, ensilage, and for herding purposes. Outside of this they do not add anything to the value of the crop.

The boys estimated their own labor at 15 cents an hour and the work of each horse at 10 cents an hour. They figured the value of the corn at the market price at the time it was harvested. In many instances they were not able to make any profitable use of the stalks.

Mr. MAGUIRE. Is this work of the boys carried on in connection with their own homes or in connection with some part of the school grounds?

Mr. BISHOP. All the boys do the work at their own homes, because we have no means of supervising it otherwise. It is simply the individual work of the boys. We hope to be able to give better supervision sometime. So far every boy has been his own director.

Mr. HAUGEN. I appreciate that this committee has other pressing matters to consider; and while we would be very glad to hear from the other boys and give them an opportunity to tell how they produced the corn, we do not feel that we ought to ask for any more of the time of the committee.

On behalf of these people I want to express our appreciation and gratitude to the committee for the courtesy extended to us.

The CHAIRMAN. On behalf of the committee I just want to state to the Representatives from Iowa and these boys and girls that we are glad of this opportunity to give you a hearing before this committee, and we appreciate the efforts being made by these boys in this most important matter to increase the agricultural production of the country. You are doing a good work, just as your southern brethren. I have this charge to make to you now: Each one of you be careful to be very polite and courteous to these girls, because in time they will be housekeepers and cooks. [Applause.]

I hope you will have a pleasant and profitable time in this city, the Capital of the whole country, and that you will go back to Iowa pleased with all you have seen and heard, have a safe return to your homes, and may peace and happiness attend you all the days of your lives. [Applause.]

Thereupon the committee adjourned.

EXHIBIT A.

The following extracts from a circular issued by the State College of Agriculture, at Ames, name the conditions governing the Iowa acre growing corn contest and give some of the directions sent to members of the club:

IOWA BOYS' CORN-GROWING COURSE, 1911.

The acre contest has been arranged for the following purposes:

1. To show how many bushels of corn can be grown on an acre of land in every county and school district in the State.
2. To show that Iowa soil will produce more corn per acre than the average Iowa farmer has been raising.
3. To encourage boys to learn the best methods of corn culture and how to make the best of their work, the soil, and the weather.

4. To give the boys of Iowa a definite thing to do which will result in increased pleasure, profit, and education of a kind that will benefit the boys, their communities, and the State.

REGULATIONS.

The following conditions must be met by each one who enters the acre corn-growing contest:

Any boy or girl, resident of Iowa, not under 10 years nor over 18 years of age July 1, 1911, may enter this contest.

Each contestant will select his seed corn and plot of ground, plan his crop, and do his own work—except a very young member may hire heavy plowing and work done in preparing the soil.

Each contestant will study outlines sent by the extension department of the Iowa State College, at Ames; make final report, exhibit samples of corn as directed, and meet all other required conditions.

The free trips to Washington, to Des Moines, and to Ames, and the other State prizes offered, will be awarded on the following basis:

	Per cent.
1. Yield of acre	40
In deciding yield, the following points will be considered:	
(*a*) Number of pounds of ear corn.	
(*b*) Percentage of shelled corn to bushel of ear corn.	
(*c*) Percentage of moisture contained in corn.	
2. Exhibit of best 10 ears of seed corn selected from acre	20
3. Written account telling history of growing the crop	20
4. Financial account showing profit in growing the corn	20
Total	100

ACRE YIELD COMMITTEE.

A committee on acre yield, composed of a representative of the extension department of the Iowa State College, at Ames, and two disinterested persons appointed by the county superintendent of schools, will measure the acre, see the crop husked and weighed, select samples to test for moisture and percentage of shelled corn, and ascertain that all requirements have been fully met by the contestant.

NOTEBOOK AND EXPENSE ACCOUNT.

In order that you may make an accurate final report and write a good history of growing your acre of corn, provide yourself with a blank book, in which you can make notes during the season. To be sure that nothing is forgotten or omitted, you are urged to make these notes at once—the day that the work is done. The notes need not be long, but they should be plainly written and very definite, so that any person by reading them can tell just what was done. Keep your notebook where it will be handy and safe from injury or from being lost.

In order that all contestants may use a uniform valuation for some items which are often given different values, all are directed to use the following expense table:

EXPENSE TABLE.

(1) Value of work of one horse per hour, $0.10.
(2) Value of work of contestant per hour, $0.15.
(3) Value of each two-horse load of manure, $1.
(4) Value of commercial fertilizing material, actual cost of material and expense of getting it upon land.
(5) Rent for the acre of land used should be valued at whatever such land would rent for under ordinary local conditions.
(6) Any other items of expense or labor should be valued at actual cost or market value.

SEED CORN.

It is important to choose seed corn that will produce a large yield of mature corn. Get pure-bred corn if possible, and of a type adapted to the soil and climate where it is to grow. Secure seed corn grown in the same neighborhood, if possible. Corn usually does not do well the first year when moved some distance.

You must test each individual ear in order to know which you should plant. Use any good, sure method you may know for learning just which ears can be depended upon to grow when planted. There must be no guessing about this. One know is worth a load of guesses.

PREPARING THE SEED BED.

Corn needs a well pulverized, fertile seed bed which will give every kernel of seed corn a chance to do its best early in the season. You want no stunted, sickly, or barren stalks on your prize acre. You can not afford dwarfs, invalids, loafers, or boarders standing room on an acre that is going to make a record for corn production. If you decide that your plat needs some fertilizing material like stable manure, apply this as early in the season as you can. See that only well-rotted manure is used. Spread it evenly and work it well into the soil.

Good corn cultivation is done largely before the corn is planted. The important thing is to put the seed bed in the best possible condition before the seed is planted and at the same time give it such preparation that it will feed and protect the corn plant best through the growing season. The condition of the soil will determine largely what should be done.

PREPARING THE SEED CORN FOR PLANTING.

The object is to have a vigorous, healthy, strong yielding stalk in every place on the acre where such a stalk can grow without overcrowding other stalks. Be sure that every kernel planted is a good, live, strongly germinating seed, and that all the irregular, undersized, oversized, and broken or diseased kernels are rejected.

PLANTING THE CORN.

Corn should be planted as soon as the ground is sufficiently warm, in order that it may mature before early fall frosts come. The best planting season in Iowa has generally been sometime between May 5 and May 15. This will vary in different sections of the State, according to the season each year, the kind of soil, and the conditions as to slope and drainage.

You will be your own judge as to when and in what manner you will plant, how many kernels to the hill, how far apart hills and rows shall be, what direction they shall run, whether to plant in the form of a square or in a less number of longer rows, how deep to plant, and other questions which must be decided. It depends largely upon the kind of soil you have chosen, how fertile it is, and what preparation you have given it; the variety of corn you plant, the kind of cultivation and care you expect to give it, the length of the growing season in your section of the State, and any other local influences that must be considered. A rich, fertile, well-pulverized soil will grow and develop a much thicker stand of corn than soil which lacks these qualities in different degrees.

The proper number of stalks, evenly distributed so that no stalks will suffer from crowding and so that there will be enough stalks to produce the greatest number of well-formed ears which the soil will feed, develop, and mature constitutes the best stand for producing a large yield of corn. Ordinarily, good fertile soil in Iowa produces a good yield of corn when from three to four stalks are grown in the hill where hills are checked in rows both ways and the hills from 36 to 42 inches apart. But experiments carried on in various parts of the State for several years show that the highest yields on good rich soil are secured from four and five stalks to the hill.

Good, fertile soil in Iowa has generally yielded well with drilled rows from 36 to 42 inches apart and one and two stalks of corn averaging 8 to 11 inches apart in the rows. A good yield requires a large number of strong stalks. A great number of good ears is what counts in producing a large acre yield.

CORN CULTIVATION.

Corn is cultivated for four important purposes:

1. To destroy weeds.
2. To help keep the soil rich in available plant food.
3. To warm the soil.
4. To form a dust mulch on top to conserve moisture.

Early cultivation prevents checking in growth of the young corn plants because of weeds or crusted soil. From the time of germination to the maturing of the corn, the corn plant should be given a chance for continuous, vigorous growth. The earlier your corn is cultivated the easier it will be to keep ahead of the weeds and the cultivation will also make the soil warmer. Shallow cultivation is best with most soils, especially after the first cutivation. Corn roots soon spread to the middle of the rows and many of them are quite near the surface. Care must be taken not to break corn roots. The cultivator may be run deep and close to the row the first time over. The first cultivation is the most important. If it is quite deep and close to the corn plants, it helps to warm the soil, destroys the weeds, and loosens the ground so thoroughly that the later plowings are easier. After the first plowing, do not run the shovels deep nor too close to the hills.

EXHIBIT B.

The sample peck of corn submitted by each member was put through the regular moisture and shelled corn value test, and the total number of pounds of ear corn valued accordingly. The 10-ear sample for quality value and judgment value of member was scored according to the regular Iowa corn score card, given below:

Corn score card, Iowa State College, extension department.

Name_____ Post office_____
Number of sample_____ Date_____

I. WILL IT YIELD? 25 POINTS.

[That is, will it yield well; has it constitution; can we depend on it even when conditions are unfavorable?]

	Perfect score.	1	2	3	4	5	6	7	8	9	10
I. Will it yield	25										
1. Size of ear	6										
2. Solidity or heaviness	4										
3. Depth of kernels	3										
4. Cheerfulness	3										
5. Size of germs	2										
6. Fullness of middle	2										
7. Filling of butts	1										
8. Filling of tips	1										
9. Space of cob	1										
10. Furrows between rows	1										
11. Size and condition of cob	1										

II. WILL IT RIPEN? 25 POINTS.

[That is, will it mature; will it ripen every year; is it safe for the locality? Will it be of good quality?]

	Perfect score.	1	2	3	4	5	6	7	8	9	10
II. Will it ripen	25										
1. Size of ear	6										
2. Depth of kernels	4										
3. Sappiness	3										
4. Chaffiness	3										
5. Starchiness	3										
6. Size of cob	2										
7. Plumpness of tips of kernels	2										
8. Adherence of chaff to tip caps of kernels	1										
9. Adherence of tip caps to cob	1										

III. WILL IT GROW? 25 POINTS.

[That is, has it vitality; will it germinate; will it all grow and grow uniformly, giving strong, vigorous plants?]

	Perfect score.	1	2	3	4	5	6	7	8	9	10
III. Will it grow	25										
1. Color and condition of germ and embryo	10										
2. Sappiness	3										
3. Chaffiness	3										
4. Starchiness	2										
5. Moldiness of cob	1										
6. Plumpness of tips of kernels	1										
7. Size of germs	1										
8. Smoothness of back of kernels	1										
9. Smoothness of germs	1										
10. Adherence of chaff to tip caps	1										
11. Adherence of tip caps to cob	1										

IV. DOES IT SHOW IMPROVEMENT? 25 POINTS.

[That is, has it breeding; has it a distinct type; will it reproduce itself; has it several years of careful selection and improvement back of it?]

	Perfect score.	1	2	3	4	5	6	7	8	9	10
IV. Does it show improvement	25										
1. Purity of color of grain and cob	10										
2. Shape of ear	3										
3. Shape of kernels	3										
4. Uniformity in size and shape of ear	3										
5. Uniformity in size and shape of kernels	3										
6. Character of dent	2										
7. Straightness and arrangement of rows	1										
Total score	100										
Rank of ear											

EXHIBIT C.

IOWA BOYS' CORN CLUB WORK—RECORD OF WINNERS OF THE WASHINGTON TRIP PRIZES, 1911.

Lester Finch, age 14, Fairbank, Iowa:

Planted Reid's Yellow Dent May 15, 2 inches deep, 4 kernels per hill, 44 inches apart. Spring-plowed cornstalk ground 6 inches deep. Disked twice and harrowed twice before planting. Cultivated corn four times; hoed it once. Corn ready to harvest October 27. No fertilizer used. Credit bushels, 99.67; production cost, 11 cents per bushel. Complete score on all points, 93.47 per cent. Washington trip provided by Wallace's Farmer, Des Moines, Iowa.

Glen Mead, age 15, Percival, Iowa:

Planted Shenandoah yellow corn May 20 on fall-plowed land. Plowed 5 inches deep, single disked. Corn planted 3 inches deep, 1 kernel every 10½ inches in rows 3 feet 6 inches apart. Cultivated first time with two-row disk, throwing dirt out. Second cultivation, four-shovel riding cultivator, throwing dirt in. Third cultivation shallow, with six-shovel cultivator. Six loads of barnyard manure were scattered on acre in March. Acre was a part of a field.

Corn ready to harvest November 1. 97.66 credit bushels, with score on all points of 92.01 per cent; production cost, 18¾ cents per bushel. Washington trip provided by Congressman Horace M. Towner.

Vivian Edwards, age 13, Clarksville, Iowa:

Planted Reid's Yellow Dent corn on ground fall plowed 4 inches deep. Disked and harrowed before planting. Harrowed once after planting. Six loads of barnyard manure were applied in spring. Corn planted May 12, 1½ inches deep, 4 kernels per hill, hills 3½ feet apart each way. Six-shovel cultivators used for three cultivations and surface cultivator for fourth time. Ready for harvest October 15. Bushels, 97.17. Score on all points, 89.58 per cent. Production cost, 14⅝ cents per bushel. Washington trip provided by Congressman Charles E. Pickett.

Harry E. La Velle, age 13, Postville, Iowa:

Planted yellow corn May 16, 2 inches deep, 3 kernels per hill, 1 foot 10 inches apart in rows 3 feet 6 inches apart. Ground had been sod, fall plowed. Cultivated four times, deep the first time, with three-shovel cultivator. Level cultivation later, with last one shallow. Ready for harvest October 1. Bushels, 96.22. Score, 96.22 per cent. Production cost, 12½ cents per bushel.

Washington trip provided by Congressman Gilbert N. Haugen.

Charles Whitehouse, age 16, Granger, Iowa:

Planted Funk's Yellow Dent corn May 17, 2 inches deep, 4 to 5 kernels per hill, 3½ feet apart each way. Ground, spring-plowed corn land, 5 inches deep, double disked and harrowed twice before planting. Four tons of barnyard manure were put on a part of the acre with a manure spreader. Blind cultivated with riding cultivator, harrowed once. Cultivated three times more and crossed with weeder once. Ready to harvest October 1. Bushels, 86.22. Score, 85.28 per cent. Production cost, 24 cents per bushel.

Washington trip provided by Congressman Solomon F. Prouty.

Clarence L. Brown, age 17, Sallx, Iowa:

Planted Reid's Yellow Dent corn May 5 and 6, 2 inches deep, 3 and 4 kernels per hill, 3½ feet apart each way. Corn land disked in spring, then plowed 6 inches deep and harrowed twice. Cultivated first time close and deep. Cultivated four times afterwards with surface cultivator. Ready for harvest October 14. Bushels, 84.69. Score, 90.58 per cent. Production cost, 21 cents per bushel.

Washington trip provided by Congressman Elbert H. Hubbard.

David R. Jones, age 17, New Sharon, Iowa:

Planted Yellow Dent corn May 24, 2 inches deep, drilled 1 kernel every 8 inches in rows 42 inches apart. Spring-plowed cornstalk ground. Plowed 6 inches deep after being disked. Harrowed twice, disked twice, and harrowed twice again, and harrowed once after planting. Cultivated four times and used weeder three times. Shallow cultivation third and fourth times. Ready to harvest October 20. Bushels, 81.32. Score, 81.47 per cent. Production cost, 28½ cents per bushel.

Washington trip provided by Congressman Nathan E. Kendall.

Ivyl E. Naylor, age 16, Stratford, Iowa:

Planted Reid's Yellow Dent corn May 10, 2 inches deep, three kernels per hill, 3½ feet apart each way. Fall-plowed clover and timothy sod. Plowed 5 inches deep. Disked four times and harrowed two times before planting. Harrowed twice before corn appeared and cultivated four times. Ready to harvest October 20. Bushels, 75.55. Score, 79.19 per cent. Production cost, 21½ cents per bushel. Washington trip provided by Congressman Frank P. Woods. Congressman Woods also provided a Washington trip for the next highest winner in the tenth congressional district. This was won by Lewis Helm, of Rutland, Iowa.

Arthur Strohbehn, age 17, Treynor, Iowa:

Planted White Dent corn May 8, 2 inches deep, three kernels per hill, 3 feet 6 inches apart each way. Ground was fall-plowed barley stubble 6 inches deep. Corn cultivated three times by ordinary walking cultivator. Bushels, 60.01. Score, 74.3 per cent. Production cost, 21 cents per bushel. Washington trip provided by Congressman W. R. Green and citizens of Pottawattamie County.

Miss Lois Edmonds, age 12 years, Clarinda, Iowa:

Sweepstakes winner in bread-baking contest. Score, 93 per cent. Used her own recipe. Did work in the presence of three judges in Ames College laboratory. Over 6000 girls took the bread-making work during the year 1911. Thirty-five girls came to Ames to compete in final tests January 13, 1912. Age of competitors, 10 to 18 years. Donor of Washington trip, Successful Farming, Des Moines, Iowa.

Mrs. Ruhanna Finch, Fairbank, Iowa, mother of Lester Finch, the sweepstakes acre corn-growing winner, and Mrs. C. V. Edmonds, mother of Lois Edmonds, the winner in bread baking, accompanied the prize winners at the expense of the William Galloway Co., of Waterloo, Iowa.

Other members of the party, friends and relatives of the prize winners, were: Mr. Roy Brown, Salix, Iowa; Miss Neola Edmonds, Clarinda Iowa; Mr. Ira Finch, Fairbank, Iowa; Mr. H. N. Merrick, Marble Rock, Iowa; and E. C. Bishop, State College of Agriculture and Mechanic Arts, Ames, Iowa, in charge of party.

EXHIBIT D.

Iowa Washington trip party January 29–February 11, 1912. Iowa Boys' and Girls' Club, winners in acre corn-growing and bread-baking contests, 1911.

WINNERS OF TRIP PRIZES.

Lester Finch, Fairbank, Buchanan County.
Vivian Edwards, Clarksville, Butler County.
Harry E. La Velle, Postville, Fayette County.
David R. Jones, New Sharon, Poweshiek County.
Charles F. Whitehouse, Granger, Polk County.
Glen Mead, Percival, Fremont County.
Ivyl E. Naylor, Stratford, Hamilton County.
Lewis Helm, Rutland, Humboldt County.
Clarence L. Brown, Salix, Woodbury County.
Arthur Strohbehn, Treynor, Pottawattamie County.
Miss Lois Edmonds, Clarinda, Page County.
Mrs. C. V. Edmonds, Clarinda, Page County.
Mrs. Ruhanna Finch, Fairbank, Buchanan County.
E. C. Bishop, Ames Agricultural College, in charge of party.

OTHERS ACCOMPANYING PARTY.

H. N. Merrick, Marble Rock.
Ira Finch, Fairbank.
Miss Neola Edmonds, Clarinda.

DONORS.

Third congressional district, Congressman Charles E. Pickett.
Fourth congressional district, Congressman Gilbert N. Haugen.
Sixth congressional district, Congressman Nathan E. Kendall.
Seventh congressional district, Congressman Solomon F. Prouty.
Eighth congressional district, Congressman Horace M. Towner.
Ninth congressional district, Congressman W. R. Green and citizens of Pottawattamie County.
Tenth congressional district, Congressman Frank P. Woods.
Eleventh congressional district, Congressman Elbert H. Hubbard.
Sweepstakes winner (corn growing), Wallace's Farmer.
Sweepstakes winner (bread baking), Successful Farming.
Mothers of sweepstakes winners, the William Galloway Co., Waterloo.

A BILL TO REGULATE THE IMPORTATION AND INTERSTATE TRANSPORTATION OF NURSERY STOCK (H. R. 18000).

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Monday, February 19, 1912.

The committee met at 10.30 o'clock a. m., Hon. John Lamb (chairman) presiding.

The CHAIRMAN. Gentlemen of the committee, we are called together this morning to consider H. R. 18000, "A bill to regulate the importation and interstate transportation of nursery stock," etc., and the patron of the bill, Mr. Simmons, will please introduce these gentlemen who want to be heard upon this matter.

Mr. SIMMONS. Mr. Chairman and gentlemen of the committee, I do not believe it would be possible for Congress to pass any law which would be more beneficial to the great agricultural and horticultural interests of this country than that proposed in the pending bill. I know that is a very strong statement to make, but I believe it, and those contentions are supported by the views of our Secretary of Agriculture and by others who are high in authority and are very competent to judge. It is a most deplorable thing that this is the only first-class nation in the world which has not adopted a national nursery-inspection law, and that when a nurseryman in a foreign country grows a crop which becomes infected with insect pests, and he is unable to sell it at home and unable to export it to any other nation on account of their existing laws, he finds the doors of this country wide open for him to bring in all of such infected nursery stock and sell it in the markets of this country, and such stock is frequently sold under the hammer and is purchased by department stores and is transported through the mails throughout the States of the Union.

I want to call your attention to what it has cost the people of this country to fight just one insect pest, and that is the gypsy moth. In 1905 the representatives of Massachusetts came to Congress and stated the gypsy moth had found a foothold in Massachusetts, and they wanted Federal aid to stamp it out or to prevent its spread. And Congress appropriated $2,500 for this purpose. We supposed that that would be sufficient to remedy the trouble, but contrary to our expectations they came back again and in 1906 we appropriated $82,500, and every year since that time we have made additional appropriations, the amount always increasing, until we have appropriated $300,000 a year to help to hold in check this one insect pest in the State of Massachusetts, and since the year 1905 the Federal Government has appropriated $1,379,000 for this one clause. In addition to that the State of Massachusetts has appropriated $300,000

annually out of its State treasury for this same purpose. The State of New Hampshire has appropriated $12,500 yearly and the State of Maine has appropriated $25,000 annually to try to remedy the same trouble. These are public moneys that have been appropriated to try to suppress the spread of the gypsy moth; but I am told that from private funds an amount largely in excess of what has been appropriated by the Federal and the State Governments has been expended by individuals of those States. It is estimated by the very best authority that the destruction to the crops of this country through insect pests amounts to between $800,000,000 and $900,000,000 annually, and of that sum at least $400,000,000 annually is due to the destruction from insect pests which have been imported, and now we want some legislation that will be a check to them. It is regretable that we have delayed action so long and brought this trouble upon ourselves, when earlier action might have prevented it.

We not only have this enormous loss every year, but yearly we are bringing in some new variety of insect pest. We know that the Mediterranean fly has come as close to us now as the Hawaiian Islands, and the great State of California, with its enormous production of citrous fruits, is threatened with the expectation that that fly will soon enter the Golden Gate of California, and will bring great destruction to the citrous-fruit crops of that State. I am glad that we have representatives here from that State who will be able to tell you of the threatening conditions there, and this committee has made liberal appropriations in the agricultural appropriation bill, which has just been made up, to help to take care of that situation.

I also want to bring to your attention the fact that the potato wart, which is prevalent in many other nations, has come as close to us as Newfoundland, and we are in daily dread that it may get into our country. If it does, it will work a great injury to one of the greatest food products of the Nation.

We have, I believe, here this morning Mr. Eugene Grubb, the great potato king of this country, who will be prepared to tell you all about the situation. I realize that extensive hearings have been held on this bill in the past, and the subject matter is well understood by most of the Members. I therefore trust that the hearing to-day will no occupy a great time, because I think that all of the older Members at least fully understand the matter, and I hope that the new Members will readily perceive that this legislation is greatly demanded and that it will be very helpful to a large number of our people.

I would like to ask that Dr. Howard, the Chief of the Bureau of Entomology, who is here and is thoroughly familiar with the subject, will now express his views to you.

Mr. TAGGART. May I ask one question for information?

Mr. SIMMONS. Yes.

Mr. TAGGART. Was there not a meeting, Mr. Simmons, held last session in which a great number of persons interested in horticulture were present and members of the Department of Agriculture, and was not a plan agreed upon at that time with reference to a bill?

Mr. SIMMONS. I think that is true.

Mr. TAGGART. Is there a report of the proceedings of that meeting?

The CHAIRMAN. That meeting was not held before this committee.

Mr. TAGGART. No; I know that.

Mr. SIMMONS. The meeting was held with the Department of Agriculture.

Mr. MCDERMOTT. There was a report of that.

Mr. HAWLEY. Mr. Simmons, have you now succeeded in getting together the nursery people and the Department of Agriculture and getting them to agree upon this bill?

Mr. SIMMONS. I will explain that the negotiations which have been held with the nurserymen with the view of reporting a bill which will meet their wishes have been conducted by the Agricultural Department, and the representatives of that department are here, and they will explain to you fully.

The CHAIRMAN. I think it will be well for us to have these hearings and hear both sides of the question.

STATEMENT OF DR. L. O. HOWARD, CHIEF OF THE BUREAU OF ENTOMOLOGY OF THE DEPARTMENT OF AGRICULTURE.

Dr. HOWARD. The Bureau of Entomology heartily indorses everything that Mr. Simmons has said and wants to get immediately to work. I would state that the nurserymen and the bureau have been in consultation, and we believe that all differences as to the details of the bill have been harmonized. Mr. Marlatt, of the Bureau of Entomology, has had that matter in charge so far as the bureau is concerned, and I have nothing further to say except to tell you that Mr. Marlatt will be glad to explain everything under consideration between the legislative committee of the National Nurserymen's Association and the Bureau of Entomology.

The CHAIRMAN. The committee will be glad to hear from Mr. Marlatt.

STATEMENT OF MR. C. L. MARLATT, ASSISTANT ENTOMOLOGIST, BUREAU OF ENTOMOLOGY.

Mr. MARLATT. Mr. Chairman and gentlemen of the committee: You have before you copies of the bill H. R. 18000. The Department of Agriculture presented that bill under the supposition that it had met the requirements of the situation and had met the approval of the nurserymen. In this last we seem to have been in error, but it is not necessary to explain the circumstances; and the work of revision of the bill to make it satisfactory to the department and satisfactory to the nurserymen has been under way for a month. We have now a corrected bill, which I hold in my hand, which is this bill (H. R. 18000) with a few changes, which have been accepted by the nurserymen and by the department, so that now we come before you with a bill which meets the approval of both the Department of Agriculture and of the American Association of Nurserymen. Necessarily it is a compromise. The Department of Agriculture has yielded some of the points which they deemed of value, and the nurserymen have yielded on their side some of the points which they deemed objectionable. The bill is a bill under which a great deal of protection can be gained. It is a long step in the right direction, and I think, under the present conditions and with the dangers ahead of us, this bill will meet the needs. The great dangers ahead of us just now are three, all mentioned by Mr. Simmons: The fruit fly,

which is in imminent risk of coming into California on fruit from the Hawaiian Islands and possibly other parts of the world; the potato wart, which is probably now being brought in with the enormous quantities of imported potatoes on account of the scarcity of our potato crop——

Mr. PLUMLEY (interrupting). Didn't I see the other day that Canada had quarantined against this?

Mr. MARLATT. Canada a year ago quarantined against Newfoundland, and naturally the surplus product of Newfoundland comes to us. Just now I am advised that Canada, inasmuch as we have no quarantine, is taking action to exclude potatoes grown in the United States from entry into Canada. That is one of the interesting developments of the last few days.

To return, we have three important dangers: (1) The potato wart, which is now in Newfoundland and which is in infested districts of Europe; (2) the white-pine blister rust, which is being brought in chiefly from a single nursery from Germany, which the surrounding States of Germany have quarantined against; and (3) the Mediterranean fruit fly. These are immediate dangers.

The bill also provides in general for three things—a Federal horticultural commission, full notification of importations, and foreign and domestic quarantine. A horticultural commission sounds formidable. One of the chief objections of the nurserymen to the bill as we had it before was that the Secretary of Agriculture, possibly acting under the advice of one bureau, would have power through quarantine to injure their interests, and that their interests would be safeguarded if there were a number of men whose judgment would combine, and hence they insisted upon this horticultural commission—no salaried commission whatever, but appointed by the Secretary of Agriculture from his own subordinates in the Bureaus of Entomology, Animal Industry, and Forestry. This commission is exactly the sort of body which the Secretary would appoint anyway. I mean the Secretary naturally acts upon advice from his own subordinates. This committee is to be a definite committee, with a chairman and a secretary. In other words, the commission which is provided for in this bill simply means an assurance to the nurserymen that there will be such a representative body. The Secretary of Agriculture is above the commission. They are his appointees, and the nurserymen therefore have the protection of this committee or board or commission, and above them the Secretary of Agriculture, and, if necessary, above him the President. This commission is to pass upon all questions of quarantine and regulation.

The second feature of the bill is that of notification. A great deal of nursery stock comes into this country now of which we can get no information whatever. The department and bureaus are endeavoring now to protect the country. There is no complete means of knowing what nursery stock comes in. We get some notifications from the customs, and the railroads send some, but much nursery stock comes in of which we are not notified. Therefore, we have made special provision in this bill for ample notification, which is obtained in two ways: First, by requiring the nurseryman to take out a permit. The permit is obligatory. The permit, therefore, simply amounts to advance information that nursery stock is to be imported

Mr. RUBEY. What is the penalty if one doesn't take out a permit?

Mr. MARLATT. All the penalties of the bill can be applied. They are found in section 12. The idea of the permit and notifications is simply to give advance information. The Department of Agriculture knows in advance that stock is to be imported, and it can, if necessary, advise State officials. Furthermore, the Department of Agriculture receives from the customs officials under this bill notice of the arrival of all goods that come in. In addition to that, notification is received from the first receiver of the goods and from the company transporting the goods. In other words, the Department of Agriculture knows in advance, through the permit, that the stock is going to be imported; it knows when it is received at customs, and it is advised again by the transportation company of the fact of transportation and the destination. The Department of Agriculture then becomes a clearing house for this information. It sends this information at once to the State official who has charge of the inspection. It should be understood that this bill does not provide for any Federal inspection whatever. The cost of the execution of the law will be, therefore, low, because the Government does not undertake to inspect imported stock in any way or any place. Inspection is left entirely to the different States, but the Department of Agriculture advises the State officials by the notifications of the arrival and destination of the stock, and the State undertakes the inspection.

Mr. RUBEY. Does every State have an officer in charge of inspection?

Mr. MARLATT. Practically every State now has equipment of that kind, and every State that does not now have it will doubtless provide it when this bill passes.

Mr. PLUMLEY. Have the States officers that are expert in detecting these things?

Mr. MARLATT. That is something that will vary in every State, and in point of fact it would vary under the Federal Government. Some States will be more thorough than others. No inspection is absolutely safe.

Mr. PLUMLEY. But the more expert and well trained the eye the safer the inspection, I suppose?

Mr. MARLATT. Yes, sir.

Mr. PLUMLEY. And you have such men in your staff?

Mr. MARLATT. We have few men. We have the best inspectors in the world, but we have not enough to supply even a single State. Under the old idea of the bill, the Federal Government was going to undertake the inspection of stock at destination, and we would simply have had to utilize very largely the men who have been trained in State work. These would be headed, of course, by the more expert men at Washington, in the Department of Agriculture. Under the present bill the States will have that work. The experts of the Department of Agriculture will cooperate, and any doubtful matter that comes into the hands of a State inspector will be sent to us. In this way we will aid and assist such inspection.

Mr. PLUMLEY. I understand you to say that the Federal Government does not inspect. Is it necessary to establish a bureau to enable the department to notify the States?

Mr. MARLATT. This commission appointed by the Secretary of Agriculture from his own subordinates will be the body to receive and transmit that information.

Mr. PLUMLEY. And simply transmit the information?

Mr. MARLATT. To transmit it to the State inspectors. All the inspection is left to the State men. The department in this manner becomes merely a clearing house, so that no stock comes to this country of which there is no warning and of which information can not be sent to the States.

Mr. PLUMLEY. I understand you to say that the function of the department is to inform the States of the arrival, and then the duty of the department ceases.

Mr. MARLATT. In so far as inspection is concerned.

Mr. RUBEY. Is it necessary to provide a commission simply to furnish that information?

Mr. MARLATT. That is only one of the features of the bill. The third feature of the bill of importance is the subject of quarantine.

The CHAIRMAN. The gentlemen of the committee will understand that this commission, so called, is only a committee appointed by the Secretary of Agriculture.

Mr. MARLATT. From his own subordinates.

The CHAIRMAN. Without extra expense.

Mr. RUBEY. Well, Mr. Chairman, the Doctor has stated that the Secretary would do the very thing that you provide for; that he would appoint these same men, though not under the name of commission; and you want to dignify it by the name of commission.

Mr. MARLATT. The nurserymen wanted to be sure of that fact of a commission, and we have no objection to it whatever.

Mr. RUBEY. But there is a strong sentiment against creating any more "commissions."

Mr. MARLATT. I think the term "commission" is a bad one.

The CHAIRMAN. Yes; we ought to change the title.

Mr. MARLATT. It is the creation of the Secretary from his own subordinates, without salary—that is, the men are already salaried—and acts as an advisory board to the Secretary.

Mr. BUBEY. But it is also the fact that the commission means additional fees and additional salaries, and every session we are called upon to increase salaries, and the addition of duties has been given as the basis and the reason for increasing them; they would say salaries should be increased $100,000 for that reason.

Mr. MARLATT. This commission is limited to five persons, and is to be appointed from the Secretary's own subordinates, who are already salaried.

Mr. HANNA. Ought not all these trees and shrubs to be inspected right at the port of entry?

Mr. MARLATT. That was a subject that was taken up several years ago, and that is the procedure in other countries.

Mr. RUBEY. That would necessitate the breaking of the original package.

Mr. MARLATT. That would necessitate a large expense by the National Government—provision for warehousing and the handling of stock—and the nurserymen maintain that it would probably mean the destruction of much of their stock. We felt that protection nearly as good could be gained if we could follow all the stock to its

destination and have it inspected there, and that is the present provision. The stock goes to its destination and is inspected there by State authorities.

Mr. RUBEY. Perhaps some flies would escape on the way to destination.

Mr. HANNA. Well, Doctor, I thought that expense would be very largely in excess if all these trees and shrubs were inspected at port of entry.

Mr. MARLATT. The importers are not so numerous but that the State men can get around to the different importing nurseries, and with the notification in advance that this stock is going to come in and the notification of the exact time when it is to arrive, I think they can take care of the inspections. New York, where the greatest amount is introduced, has a splendid system of State inspection. If all the other States had the same system there would be an ideal condition. The New York inspectors have been perfectly able to inspect the vast quantity of material which comes to New York. In practical working out that has not been found to be an objection.

Mr. RUCKER. I desire to direct Dr. Marlatt's attention to the provision contained in lines 8 and 9 of page 3 of print of January 15. It seems to require this notice to be sent to the commission or the proper agent designated for this purpose in the State or Territory, etc. It speaks of "agent." Does that contemplate the State inspector of nurseries where there is such officer?

Mr. MARLATT. This bill covers the United States and all its territorial and insular possession. The wording in those two lines, 8 and 9, is made to cover cases where, as in the Philippine Islands or Porto Rico, a notification from the customs officials, for example, coming to Washington of the arrival of goods, the return notification from Washington would be so delayed that it would be useless. Hence, in those places, or any State where such notification could not come to Washington and go back again without too much loss of time, the provision is that a local agent, who will very likely be the State agent designated for the purpose, will also become the recipient of the information.

Mr. RUCKER. They may designate the same man?

Mr. MARLATT. Yes; the State inspector, if there is one, may be thus designated by the commission.

Mr. RUCKER. But they may designate some other person who is not the recognized inspector of the State? Is that the provision of this bill? In other words, let me ask this question: I believe there is some objection to the word "commission," and that may be changed. But this body may designate some person in a State remote from here to receive this information?

Mr. MARLATT. Yes, sir.

Mr. RUCKER. The person designated may be the State inspector or may not be?

Mr. MARLATT. The wording of that is not a matter of any importance. I mean we are perfectly willing to have that changed.

Mr. RUCKER. Would you have any objection to amending that section so as to carry this feature in it: After the words—if you will turn to your bill—after the word "destined," at the end of line 9, amend so as to read: "The State inspector to be thus designated for such purpose in all States having such officer"?

Mr. MARLATT. There is no objection to having a definite person indicated for these places beyond the reach of Washington. The idea of the section is, as I have already explained to the committee, that this information from the customs and from all these transporters and first receivers comes to Washington and in distributed from Washington to the States. Now, if the State or Territory is far away, we can make an arrangement with the customs officer in that State or in that Territory, such as the Hawaiian Islands, for instance, or the Philippines, or Alaska, to send the notification direct to the local officer, and undoubtedly that officer would be the State or Territorial officer if there be such. We are perfectly willing to put that in.

Mr. RUCKER. I thought you would have no objection to having that in. I thought this language would do, but it might be improved, so that in those States where there is a State inspector, particularly designate the State inspector.

Mr. MARLATT. We have no objection to that.

Mr. TAGGART. Suppose the State should have no inspector, what would you do, name a man from the department?

Mr. MARLATT. In case the States have an inspector we would designate him. We have not burdened the bill with all these details, which will come under the regulations. Where a State, New York State or Missouri or Kansas or Illinois, has a State inspector (and all those States have them, I believe), we, upon receiving the information at Washington from these several sources, will transmit it direct to that State inspector. There is no provision in the law for the Federal Government to appoint any other person. We must transmit that information to the State inspector.

Mr. TAGGART. I understand that. But let us assume that in my own State we have no nursery inspector at all and no agent such as is designated here in the bill to receive the information. How are you going to reach a situation of that kind?

Mr. MARLATT. We send the information in that case to the officer who comes the nearest to filling the bill. In other words, the entomologist, if there is one.

Mr. HAWLEY. Would he have authority?

Mr. MARLATT. Only as the State allows. It then becomes a matter for the State to protect itself. Most of the States have already made provision for such inspection.

Mr. TAGGART. That indicates that you have a very weak bill on this proposition.

Mr. MARLATT. The bill has eliminated all Federal inspection. That is a weakness or strength, depending on the point of view. Of course, the State inspectors are local men who understand local conditions, and if they are good men, as they are in many States, the work will be done just as well as or even better than it would be by Federal authority. If the State has no inspectors there is danger of infestation in that State. The reason Federal inspection was left out was due primarily to the question of legality, as I understand it. I mean whether the Federal Government has power to inspect goods in a State after they have reached destination and have become merged into the property of the State. It has this power only under one condition, as I understand it. It can require a Federal

certificate of inspection as a condition for interstate transportation, but if the goods are to be locally distributed in any State I think it could do nothing legally.

Mr. TAGGART. Now, as I understand it, the only power is the power to furnish information from different sources as they get it to the various State inspectors or designated agents.

Mr. MARLATT. That is one power, but the larger power is the power of quarantine, and that is where the Federal authority comes in. I mean, for instance, the Federal quarantine against these diseased potatoes, or diseased pine trees, or the fruit fly in Bermuda, or wherever it may be. This quarantine is the larger power.

Mr. TAGGART. Does this power go further and give the Federal Government power to quarantine one State against another State in interstate shipments?

Mr. MARLATT. Section 8 relates to foreign quarantine, and the section following it, section 9, relates to domestic quarantine. Under the domestic quarantine the Federal Government can declare a quarantine against some new pest—for instance, the potato wart; the Federal Government could quarantine under this bill the farm having that pest until that infestation had been removed.

Mr. TAGGART. Why do you confine that to quarantine against new infestation? For instance, you have an outbreak of the gypsy moth and the brown-tail moth in New England. It has been there for a good many years. Is it the purpose of this act to lift the quarantine against further importation of that pest or not?

Mr. MARLATT. That is the kernel of the point of differences between the Department of Agriculture and the nurserymen. The Department of Agriculture had a quarantine provision which was applicable to any danger that might come up. The nurserymen felt and have maintained, and doubtless justly from their point of view, that a quarantine against the gypsy moth and brown-tail moth would practically put them out of business, and for this reason: All of Europe and all of Asia are more or less infested with the gypsy moth, and largely, also, with the brown-tail moth. Hence any quarantine against gypsy moth or brown-tail moth would mean a quarantine against all plant products from Europe and possibly from Asia. We held that inasmuch as the gypsy moth and brown-tail moth are already here, and inasmuch as they are large insects and can easily be seen by inspection, that we could safeguard the entry of such material into this country by requiring inspection at both ends—that is, on the other side, and following that by inspection here. Hence we waived that point and were willing to accept that danger in deference to the contention of the nurserymen.

Mr. HAWLEY. Who is to determine whether infestation is new or not?

Mr. MARLATT. The commission.

Mr. HAWLEY. Is there any appeal from that decision?

Mr. MARLATT. The decision of the commission is subject to review by the Secretary, inasmuch as the commission is appointed by him, and, of course, there is the right to appeal to the Secretary, and there is the right of appeal, if they want it, to the President of the United States.

Mr. HAWLEY. Or the courts?

Mr. MARLATT. Or the courts.

Mr. HAWLEY. You do not anticipate any danger of legal action?

Mr. MARLATT. No, sir. I anticipate that when the commission realizes that there is any danger, and their action is approved by the Secretary, the danger will be such a real one that there will be no objection to it.

Mr. HAWLEY. Do I understand that inspection of the brown-tail moth and the gypsy moth is never had? You require inspection direct?

Mr. MARLATT. Yes, sir.

Mr. HAWLEY. And notice of the importation will be given you by the customs officials to forward to State of destination. Suppose that State has no official inspection, and nursery stock is delivered and sold by the nurseryman and the brown-tail moth and gypsy moth are distributed throughout all that State, is there anything to prevent that?

Mr. MARLATT. Nothing at all except the interests of the State itself.

Mr. HAWLEY. Well, but every other State surrounding it or close by it may have inspection. You can not quarantine against the gypsy moth because you do not subject it to quarantine.

Mr. MARLATT. Not locally, of course. It is a condition which we can not guarantee protection in this country against—the brown-tail and the gypsy moth. We have quarantine against any new thing.

Mr. HAWLEY. Now, simply suppose this stock is in Idaho; it goes into California, Oregon, and Washington. Ought there not to be some provision in the bill to eliminate that danger?

Mr. MARLATT. We do. There ought to be such a provision in the bill. The fact that we propose to allow under this bill the continuation of the importation of nursery stock from abroad made it seem an unfair and an unjust discrimination to place restrictions upon stock from the New England States. In other words, if we put a quarantine against New England we would be putting New England in a worse way than France.

Mr. HAUGEN. If a condition existed in the New England States—is not the gypsy moth as destructive as any insect is that is likely to be imported?

Mr. HAWLEY. Is it not for all practical purposes a new insect in all States where it has not yet gone?

Mr. MARLATT. That would be a matter for determination. I fancy that the nurserymen themselves who insisted upon this wording would have no objection to the department making an effort to exterminate the gypsy moth in Mississippi, Ohio, or even New York. But this particular wording is the crux of the whole matter, the point of compromise between ourselves and the nurserymen. We have felt that if we can not get legislation except by this compromise we will still be able to safeguard ourselves against these dangers—brown-tail and gypsy moth—by having all the States thoroughly advised and by seeing that inspection is made at both ends.

Mr. HEFLIN. Where is it now found?

Mr. MARLATT. In practically all the New England States.

Mr. LEVER. You said a moment ago that the appeal from the decision of the commission as to the new ones could be carried to the

Secretary, and from there on up to the court. I do not find any such provision.

Mr. MARLATT. You suggested the courts. I said it might possibly be taken into the courts.

Mr. LEVER. I find here in section——

Mr. MARLATT. I can tell you exactly what the provision is. It is that before any quarantine can be declared notification shall be given by this board to the parties in interest and published in the nursery journals, and such notification will be ample. After reasonable time there will be opportunity for parties in interest to be heard. They can present such arguments as they please, to feel sure that the commission understands the situation. The commission then, on its own judgment, declares the quarantine. Of course the commission can be overruled by the Secretary, and the Secretary can be overruled by higher authority—that is, by the President. But there is no provision for a court procedure.

Mr. RAKER. May I ask a question?

The CHAIRMAN. Yes.

Mr. RAKER. I understood the doctor to state that there could be no bill passed here that the nurserymen were objecting to, and from his statement that this brown-tail moth had gotten itself fixed in the Eastern States and was not in the West, and that they had the Mediterranean fly in the West but not in the East, I ask, is it possible that the interests of this great agricultural country can not be protected, and that Congress must surrender to the nurserymen, whose interests are small as compared with those of the American people? I would like to have the doctor explain what he means by that.

Mr. HAWLEY. In the matter of the brown-tail and gypsy moths, they are new pests so far as the West is concerned. They are not there. There are 160,000,000 of acres of national forests, the timber on which is worth two billions. If they once got out there, there would be no way of getting rid of them. They would destroy that immense public property.

Mr. MARLATT. As I said before, and I do not want it to be overlooked, this measure is a compromise. We have tried to get legislation here for 14 years, and we have been working on this bill for 3 years, and it has been twice reported by this committee to the House, and its passage has been blocked by the opposition, reasonable from their point of view, of the nurserymen, and it has looked very much to us that we would have to come together before we could get legislation. Hence, while I am speaking for this bill as it now reads, it must be understood that it is a compromise—it does not represent the department's views. But it will be an immense benefit to the country. It will cover the fruit fly, it will cover any new danger that may come in. There will be no objection whatever on the part of the nurserymen, I feel sure, to the Department of Agriculture undertaking to clean up an outbreak of the gypsy moth in Missouri, for example.

Mr. HAWLEY. But, taking the point of the new pest, the Mediterranean fly coming into the country. What good would it do the fruit growers in the West to prevent the Mediterranean fly coming in and have the gypsy moth come in and do more damage than the fly?

Mr. MARLATT. The wording of this bill on page 5, as originally printed, would have covered this case. The wording there is, "Any injurious insect new to or not theretofore widely distributed throughout the United States." That would have given more power to the commission, and that wording was put in particularly on account of the gypsy and brown-tail moths.

Mr. SIMMONS. What is the value of imported nursery stock in each year in this country?

Mr. MARLATT. I have no late information. The total value of all plant stock coming into this country is about a million and a half, of which nursery stock proper—woody plants—is about $350,000.

Mr. SIMMONS. To protect this $300,000 or $400,000 annually of nursery stock this whole compromise has been made. The endangering of the vast interests of this country for the protection of the very small amount of business is unwarranted.

Mr. LEVER. I did not understand your reply to Mr. Hawley, as to whether or not under the terms of this bill and the wording "new infestation" you have the authority, for instance, to quarantine the State of Mississippi against the brown-tail moth or the gypsy moth in the New England States. In other words, would the gypsy moth in Mississippi be regarded as a new pest—a new infestation?

Mr. MARLATT. The wording which the nurserymen have inserted is, "New to or not theretofore discovered in the United States." I think that would prohibit our taking any action, except by permission, on the brown-tail moth in Mississippi.

Mr. WHITACRE. Does this bill provide for interstate shipments—that is, nursery stock in this country shipped from one State to another?

Mr. MARLATT. No; simply relates to foreign stock.

Mr. WHITACRE. I meant if shipments are made from those regions where they have gypsy moths into another State. Does this bill provide that they may be inspected on arrival in those States?

Mr. MARLATT. No; that is already covered by State legislation. Stock which comes into a State is inspected in the State.

Mr. WHITACRE. Do they have them in most of the States?

Mr. MARLATT. They have them in most of the States.

Mr. PLUMLEY. What is the meaning of page 5, line 4, "Now, and not heretofore"?

Mr. MARLATT. The words should be "new to." That is a misprint. I think the same misprint occurs again.

Mr. LEVER. Would there be any objection on the part of the nurserymen to giving this commission power to quarantine one State against infestation from another State?

Mr. MARLATT. The bill has that power now. The power is not designated as State power, but it can quarantine infested districts.

Mr. LEVER. Against new things?

Mr. MARLATT. Against new things; yes; but not against anything which is now in the United States.

Mr. LEVER. I kept this gypsy moth in my mind. It seems to me there ought to be provision to quarantine the State of South Carolina or to quarantine the New England States against carrying this infestation into South Carolina. Is there any such power in the bill?

Mr. MARLATT. There is no such power in the bill.

Mr. RUCKER. It is not impossible to ship from one State now to another?

Mr. MARLATT. It should be stopped in all such States by State inspection. That part of the power of control has been left to the States.

Mr. RUCKER. It is recognized that the States have some powers, and some things are left to the States to do.

Mr. LEVER. I am in full sympathy with you.

Mr. HAWLEY. Does not the Government, through the Agricultural Department, have power to prevent the interstate shipment of infected cattle?

Mr. MARLATT. Yes, sir.

Mr. HAWLEY. Why could not such a power be inserted here, then, as to the interstate shipment of nursery stock?

Mr. MARLATT. The question is now one of limitation. We have such power, limited to new diseases or pests.

Mr. HAWLEY. Ought not it to include every disease and any pest? The gypsy-moth pest in South Carolina would be just as bad as any other, whether new or not.

Mr. MARLATT. I agree with you on that point. But this is the status of the adjustment between ourselves and the nurserymen: We were standing for the utmost, and the nurserymen objected to this; but this is a compromise in which the Department of Agriculture feels that much protection is given, and it puts us on a plane where the nurserymen join with us in endeavoring to get the legislation.

Mr. RUCKER. There are in some States several nurserymen?

Mr. MARLATT. Many hundreds; yes, sir.

Mr. RUCKER. Well, such a provision suggested by the gentleman would require Federal inspection at each particular nursery, to see that there is no infestation at that particular nursery, because a quarantine against one would not necessarily be against all in the State. One alone might be infested; is that true?

Mr. MARLATT. Yes, sir.

Mr. RUCKER. Would it not require quite an increase of appropriation to make the inspection for the department to be sure that there is no infestation, and would not that be duplicating the work that is already being done by the State?

Mr. MARLATT. The Department of Agriculture would under those conditions act on information, but I don't think it would go out into the States and hunt for trouble. If reports of infested material came to the department, they would act on information.

Mr. HAUGEN. The States have the same jurisdiction over imported stock as over interstate stock, have they not? Is it not quite as important to extend this to interstate commerce as foreign?

Mr. MARLATT. That is already covered by State legislation.

Mr. HAUGEN. But importation is also covered?

Mr. MARLATT. No, sir; the State can not establish foreign quarantine, and the State can not establish domestic quarantine in any State except its own, and the State can not require this notification and all this certification of stock from abroad.

Mr. HAUGEN. Why should not the State have the same information as to other States that it has as to other countries?

Mr. MARLATT. It has not the means of acquiring that information which the Federal Government has.

Mr. HAUGEN. Why should not the Federal Government furnish the State with that information?

Mr. MARLATT. That is provided under this bill.

Mr. HAUGEN. I understand this is limited to imported stock.

Mr. MARLATT. The Federal Government receives notification of all stock imported; the State could not get this information.

Mr. HAUGEN. But it does not furnish information as to infested stock in any other State. For instance, the infesting moths in New England States.

Mr. MARLATT. That information is promptly furnished by the Government; that is, bulletins are now published on the gypsy moth showing that it is infesting certain places.

Mr. HAUGEN. Well, the same information is furnished as to foreign countries—simply bulletins.

Mr. MARLATT. No; the information in this country is exact information of intended importations and arrivals.

Mr. HAUGEN. My contention is that the States should be furnished with information of intended shipments from one State to another.

Dr. HOWARD. There is inspection now—inspection by the States and inspection by the Bureau of Entomology under the act preventing the spread of moths. They are inspected, but you have not the power of quarantine.

Mr. HAUGEN. If you can quarantine against a foreign nation, why can not you quarantine against a State?

Dr. HOWARD. The railroads refuse to receive it.

Mr. RUCKER. That amounts to quarantine, does it not? It prohibits the shipments.

The CHAIRMAN. Is there any other question for Mr. Marlatt?

Mr. MARLATT. I may say that the bills the members have before them do not include the compromise features which I have discussed. I have a number of copies here which have those corrections inserted.

The CHAIRMAN. How many copies?

Mr. MARLATT. About a dozen.

The CHAIRMAN. It has not been printed?

Mr. MARLATT. No, sir.

The CHAIRMAN. It is not before us officially?

Mr. MARLATT. Most of the corrections in this bill are immaterial. Some of them are our own for the correction of the bill itself.

The CHAIRMAN. I suggest that you hand your bill over to the patron of this bill, Mr. Simmons, and let him pass judgment on it and let it some before the committee. That is the only way we can get it.

Mr. LEVER. Why not let him explain what those changes are?

The CHAIRMAN. Dr. Marlatt, if you prefer to explain the differences between the bill you have and the present printed bill we would aprpeciate it.

Mr. MARLATT. Correction on page 2, line 12—we insert the word "apparently."

The CHAIRMAN. Let Mr. Simmons run this bill over as it has been written up.

Mr. SIMMONS. I thought it would be better to let the doctor explain these proposed changes.

The CHAIRMAN. There are so many of them.

Mr. PLUMLEY. I can not carry them in my mind.

The CHAIRMAN. Mr. Simmons and the doctor can go over this together.

Mr. LEVER. I ask that Dr. Marlatt may be requested to present a brief statement as to the suggested amendments to the bill which will be introduced as the compromise bill between the department and the nurserymen.

Mr. WICKLIFFE. I would like to ask what trees the gypsy moth and the brown-tail moth infest?

Mr. MARLATT. They infest practically all forest and fruit trees; they affect deciduous trees and pine trees as well.

The CHAIRMAN. Mr. Simmons, whom else have you now?

Mr. SIMMONS. I should think, Mr. Chairman, that the Members of Congress who would like to go away should be heard first. The gentleman from California, Mr. Raker, will present his views.

Mr. RAKER. Just a moment, please. I did not come here this morning except to listen, and I have no statement to make now except that I have been in communication with some friends in the West who are not satisfied with some of the provisions of the bill as printed, and I came in to look into it, because I think the public interest requires some such law. I want to say to the committee that it may be, as I understand it, that a law will ultimately be drafted so that the nurserymen will have no objection to it. As long as it is not so drawn, I would like to have the committee defer action until my friends have a chance to come on here. I had a telegram last night from a gentleman largely interested in the subject. I do not want the gentlemen to think I am a bloated stockholder in a nursery. I never owned a fruit tree in my life. There is no nursery concern in my district, but there are in my State, and as a citizen of the State and of the United States I am interested in fair legislation, and if it becomes necessary I would ask the committee before finally passing on this to give this gentleman a chance to be heard, and in that connection I will say that Mr. Tefley was here from New York as a representative of the National Nurserymen's Association, and before the committee adjourns he would be glad to make a few statements to the committee relative to some things that could be said, and particularly as to the wisdom of the new amendments as distinguished from the printed bill.

ANALYSIS OF THE PLANT QUARANTINE BILL SUBMITTED BY DR. MARLATT.

In general, this bill provides for three things:

(1) Establishment of a Federal horticultural commission, (2) full notification of importations, and (3) foreign and domestic quarantine:

(1) The creation of a Federal horticultural commission, to be appointed by the Secretary of Agriculture from experts in two or more bureaus of the department, namely, the bureaus directly concerned in the enforcement of the act.

The idea of the commission is to give nurserymen assurance that the making of regulations or declaring of quarantine will be carefully considered by a

number of individuals, and that quarantine can be declared only after due notice and opportunity for hearing by interested parties.

(2) The bill provides for importation by permit and for ample notification. The idea of the permit and the provisions for notification by the customs officers, receivers, and shippers is simply that the Department of Agriculture shall be fully advised of both the intended and the actual importation of nursery stock. No Federal inspection is provided for, it being the intention of the act that such inspection shall be conducted entirely by State officers and under State regulations. The Department of Agriculture receives, however, advance information, through the permit, and prompt information, from the sources indicated, of arrival and interstate shipment; and this information is distributed by the department promptly to the State inspectors concerned, so that the imported stock may be promptly examined and freed. The responsibility and cost, therefore, for the actual inspection remains with the several States.

(3) The two quarantine sections constitute the third and important feature of the bill. Section 8 provides for quarantining foreign countries or districts to exclude specifically the white-pine blister rust and the potato wart and any other plant or plant product the entry of which would mean the introduction of plant diseases or insect enemies new or not theretofore discovered in the United States.

Section 9 provides for quarantining, in the matter of interstate traffic, of limited districts in the United States or any of its possessions, where such white-pine blister rust or potato wart or any other plant disease or insect enemy newly discovered in the United States may become locally established.

In the foreign quarantine the particular plant conveying the danger is excluded, but no restrictions are placed upon the importation of other plants not affected by such quarantine. The local quarantine, as regards interstate transportation, prevents the moving from a particular district of a plant so quarantined until the quarantine is withdrawn. In local quarantine the actual disinfection or destruction of the quarantined articles is left to the particular State concerned. Neither the foreign nor domestic quarantine can be ordered except after due notice to interested parties and the affording of opportunity for a public hearing.

In brief, therefore, the Federal powers cover the establishment of foreign and domestic quarantine, the issuance of permits, and distribution to the several State officials of exact information in regard to origin, arrival, and destination of importations. To the several States are left the responsibility for the inspection at destination of imported stock, and the cleaning up and disinfection of quarantined districts.

STATEMENT OF REPRESENTATIVE RAKER, OF CALIFORNIA.

Mr. RAKER. I have but a little to say on this matter, because of the peculiar condition that has arisen since the first introduction of H. R. 12311. This bill, H. R. 18000, is a material change from the bill as originally introduced, and which has been taken up thoroughly by the horticulturists and agriculturists and others in the State of California, and particularly by its legislature, and I desire to have inserted in the record a resolution of the State of California at its special session in December, 1911, which even goes further than the first Simmons bill; in particular, asking Congress to permit inspection at the port of entry. Now, our people are much interested in this matter, and if a new bill is introduced, I would like the opportunity to convey to California a telegram so that the people there could have an opportunity to be heard upon the matter, as they believed that the original bill would be the one to be considered, with the amendments suggested by them; and as the matter stands to-day, it seems to relieve the entire situation—in other words, presents a bill—so far as they are concerned, and as they appeal to this Congress, with practically no protection, so far as the various kinds of moths and pests

and flies are concerned, as it affects the great State of California. The resolution reads as follows:

CHAPTER —.

SENATE JOINT RESOLUTION No. 10.—Relating to the Simmons national quarantine act, now before Congress.

Whereas the State of California is now expending more than $1,000,000 annually in combating insect foes, one firm having spent more than $25,000 in a single season in the effort to control a single insect pest; and

Whereas we are confident from our recent experiences that a thorough quarantine during all the past of our horticultural history would have saved to our State a large part of this vast expenditure, as many of the pests now working havoc would not have gained admittance.

Now, you see that goes to the very gist of the gypsy fly and brown-tail moth that exists in the East, and with that vast territory in the West why should these people stand idly by and permit that to be shipped in their country, so that their orchards should be absolutely destroyed? It seems to be only giving them a license without the necessary quarantine, dipping, or fumigation, so that these plants, trees, shrubs, and bulbs do not contain these various insects.

And whereas it is generally conceded that our California quarantine, the best in the country, has saved millions of dollars to other States, as well as our own, and so is national in its scope, and should be national in its origin and authority; and

Whereas it is imperative that persons and baggage be searched as well as fruits, plants, or seeds, etc., and this can only be done by consent of the Government, authorized by Congress.

That is one of the things that the State of California is urgently asking Congress to do by this bill, that these insects and these pests may be eradicated and that they may be exterminated, so far as the great West is concerned, and thereby assisting the East and preventing those that come to the West from coming farther East.

And whereas we search persons and their effects when we suspect that they carry smuggled diamonds or other illicit valuables, and our fruit interests are of far more value and importance than are diamonds or other precious stones; and

Whereas insects carried by plants, especially such insects as the gypsy and brown-tail moths and the dreaded Mediterranean fruit fly, if transported across the country from port of entry, as from New York to California, or San Francisco to New England, are liable to escape in transit, and thus may work irreparable damage.

Now, that goes right down to the matter at hand.

And whereas it is imperative to the success of our agricultural interests that strict quarantine be established and rigidly enforced against any region harboring insect pests; and

Whereas it is of exceeding importance to our agricultural interests to establish quarantine, and to quarantine at such points as Nogales and El Paso, and also to search baggage and even persons, which can only be done by national permission and authority: Therefore be it

Resolved by the senate and assembly, jointly, That we respectfully urge the Congress of the United States to pass the Simmons quarantine bill now before Congress, and to include in such bill a provision making the port of entry and not the point of destination the place of inspection and decision, and also a provision permitting a strict quarantine against any district of the Uited States or any foreign country where insect pests that threaten the safety and welfare of our agricultural interests are known to exist; and it is further

Resolved, That our Senators be instructed and our Representatives in Congress requested to use all honorable means to secure the passage of the Simmons

bill, with the two provisions designated above included in the bill; and it is further

Resolved, That a copy of this resolution be forthwith transmitted by the chief clerk of the assembly to the President of the Senate of the United States and the Speaker of the House of Representatives of the United States, and a copy hereof to each Member of Congress from the State of California.

Now, you can readily see that the special matter this morning is so entirely different from the bill as originally introduced, and as the great State of California has spent millions of dollars, and, by its legislature, unanimously urged Congress to pass the Simmons bill as presented, with the amendment of inspection at the port of entry, I must ask on behalf of that State and of its great interests that before you come to any final determination upon the bill H. R. 1800 and the supplemental bill that has been suggested this morning we at least have an opportunity to be heard in behalf of our interests.

There is a gentleman here from California who informs me that he just left a great convention in relation to citrus fruits, and what he says will be of great value and considerable interest. Mr. Chairman, may I tell my people that you will give them a hearing before the matter is further determined?

The CHAIRMAN. I think the developments this morning necessitate something of that sort.

Mr. RAKER. Why, it is so apalling to me that it seems to me that our interests and the interests of the West would be abandoned.

The CHAIRMAN. It has taken a wider scope than was expected.

Mr. RAKER. Mr. Chairman, it seems to me that any one of our interests, covering a small territory, if you please, as compared to the great interests of the Nation, who came before a committee of Congress and said, "We have compromised the interests of the people in favor of our own" ought not to be considered by such committee, or by the House, and the facts are to be determined, and if it is to the interest of the Nation that its trees and bulbs and plants should be sent free from pest to all the Nation, that this committee will report favorably to the House, and will give such legislation to protect the vast interests of the State of California.

The CHAIRMAN. How many gentlemen want to be heard?

Mr. SIMMONS. All of these gentlemen want to be heard.

STATEMENT OF REPRESENTATIVE HAYES OF CALIFORNIA.

Mr. HAYES. I want to say to you gentlemen that I am not only a Representative of the State of California, but I represent a district which I think is the largest fruit district in the world; the district representing all the counties from San Francisco to Los Angeles west of the Coast Range, and the district which produces not only some citrus fruits, but probably a very large majority, or more than half, of the deciduous fruits of the State of California; and our people are intensely interested, as you can well understand, in this legislation. We are here asking that we may be adequately protected against the various pests, not only from abroad, but from those sections of our own country which are infested. My colleague has read to you portions of the legislation which passed the special session of our legislature last December. The legislature was called in special session for the express purpose of passing that legislation,

and the immediate incentive for that legislation was the terrible fright that our people are having as a result of the ravages of the Mediterranean fly in the islands of Hawaii. This fly, as perhaps some of you may not know, is a new pest. It has not long been known anywhere. In Hawaii it has not been known until last year, although two years ago it was imported into Hawaii, yet last year was the first year that it has produced great damage. Now, this fly attacks not only the citrus fruits; it attacks them first, but it attacks all the deciduous fruits; it attacks vegetables, beans, peas, and peppers, and various things like that, so that its ravages are widespread.

For instance, the island of St. Helena and the island of Malta have been ravaged so that the fruit and vegetable interests upon which the people depend for a livelihood have been absolutely destroyed, and to-day an agent from those islands is in the State of California looking for a place to colonize the destitute people from those islands, and, as I say, the scare that the fruit men of California and the Pacific coast generally have had as a result of these terrible ravages of the Mediterranean fly is the worst scare that they have had during the 25 years that I have lived in California. To be sure, our State has quarantined against this and all other insect pests, and we have a quarantine and inspection service probably the equal of any in the world, and our people are protecting us the best they can against this and all other pests, and I am afraid that in doing this they are doing things that there is no warrant in the law to do. They are destroying things and taking liberties with people and shippers that perhaps they are not warranted in doing, strictly speaking. But they feel that the end justifies the means. We desire not only the supplemental legislation that the original Simmons bill proposes in order to supplement what our own State officials are doing, but we especially desire the quarantine provisions in this bill, in order that fruit from the infested regions like Hawaii may be absolutely prohibited, for that is the only safe way. The inspectors in California—we had a letter from them a few days ago. and they tell stories like this: They go aboard the steamers and not only inspect the shipments of fruit or shipments of every kind to see that there is no fruit from Hawaii that might be infected; they go through the baggage of the passengers; they inspect everything that the passengers bring. In one case they came to an old lady and asked her if she had any fruit. She insisted that she had not. The inspector went through the baggage; he went through several pieces of baggage.

The CHAIRMAN. Did the customs people assist? Have they got a right to do that?

Mr. HAYES. I doubt if they have. They found nothing in several bags that they inspected. Finally they came to the last bag, a little hand bag. They opened it and found a Hawaiian orange. She was protesting all the time, saying, "Don't you believe me? Do you think I would impose upon you?" They found this Hawaiian orange. She then said, "I hoped you would not find it." As you know, the Hawaiian orange has not the same color as the domestic.

But these are some of the difficulties that we encounter in trying to protect ourselves against the menace which would absolutely destroy the great fruit industries of California, which bring into our State and into the country millions of dollars every year, and are

vastly more important than the other agricultural products of our State, probably more important than all the rest of the productions of the State; and I hope that you gentlemen will not, as my colleague has said, take action adverse to this legislation until the people of our State have been heard. I for one am willing to take my chances before the House in presenting the claim, not only of my State, but of the fruit industries and the agricultural industries of the whole country, as against any small interest that may be striving against us for protective measures that every civilized nation in the world except this has already taken. I hope this committee will put aside this sort of petty special pleading, get down to the facts before this committee, and report an adequate bill to the House, and let us have a measure that will protect all the agricultural and other interests of this country against infection, no matter where it comes from.

Mr. RAKER. Mr. James Mills is here from California. I don't know him, but I have heard of him. He has come a long way. He says he has to go away very shortly, and he would like very much to be heard by this committee, as horticulture is his business. He has been giving the subject great attention, and if it is possible for your committee to hear him he would consider it a great favor.

The CHAIRMAN. Will he be here to-morrow?

Mr. MILLS. I have been here 10 days, Mr. Chairman, and my interests are suffering by being away.

The CHAIRMAN. What is the pleasure of the committee? We have a serious proposition before us.

Mr. SIMMONS. Mr. Chairman, if I may be permitted. As I understand, the session of the House to-day will be occupied with the general debate on the chemical schedule. If that is the case, could we not continue this hearing this afternoon?

The CHAIRMAN. If it is agreeable to the committee, 2 o'clock will suit me.

Thereupon, at 12.10 o'clock p. m., the committee adjourned until 2 o'clock p. m.

AFTER RECESS.

The CHAIRMAN. I would like to inquire of Mr. Simmons, who is the next speaker, what he would like to present.

Mr. SIMMONS. I think we ought to hear from Congressman Kahn.

STATEMENT OF HON. JULIUS KAHN, MEMBER OF CONGRESS.

Mr. KAHN. Mr. Chairman and gentlemen, I come from a section of the country where fruit growing is the important industry. We have millions of dollars invested in that industry. Our State—the State of California—expends approximately $1,000,000 per annum in fighting insect pests, and yet occasionally a new pest enters the State. Two or three years ago the pear thrip made its appearance My impression is that it must have come in through the port of San Francisco, for it attacked the pear orchards in the vicinity of San Francisco and for several years destroyed practically the entire crop. The Department of Agriculture came to our assistance, sent its experts into the orchards, and undertook to discover the habits of the pest. It has made recommendations, and our fruit growers have

followed them with a great measure of success. At the present time there is the alfalfa weevil in the West that threatens to destroy the alfalfa fields. Then, in the Territory of Hawaii, there is the Mediterranean fly, which has been going around the world, starting out originally, I believe, from the island of Malta. It subsequently attacked the fruit orchards in the island of St. Helena and from there was carried to Cape Colony. From Cape Colony it was carried to Australia, and from Australia to New Zealand. It is now in Brazil, and has been brought into the Territory of Hawaii. We fear it in California, because we know what a great destroyer of crops this particular pest is. It seems to me that this legislation that is now pending before this committee is one of the most important measures pending before Congress. The Members of the California delegation discussed the matter recently at a meeting of the delegation, and we went over the bill very carefully. We went over it with some of the officials of the Department of Agriculture.

The CHAIRMAN. You mean H. R. 18000?

Mr. KAHN. Yes, sir.

Mr. RAKER. No. 12311.

Mr. KAHN. I think we agreed subsequently on the bill No. 18000 as the latest expression of the wishes of our delegation and the Department of Agriculture. I believe this is the bill that was agreed upon at the meeting of the delegation.

It seems to me that the Federal Government should protect the plant life of this country just as it protects human life. If a vessel were to come into one of the ports of the United States carrying some contagious and loathesome disease which might spread into an epidemic, the vessel could not land passengers until the disease was stamped out; and I believe the nursery stock and the fruits that are brought into this country should be examined with the same care that the passenger is examined when he comes to this country. The States of the Union to-day are confronted with this problem. We all know that a few years ago the brown-tailed moth got a foothold in this country. If there had been a proper quarantine at that time in all likelihood it would have been kept out and the millions of dollars that have been expended to eradicate it would have been saved to the people of the United States or could have been used advantageously for other propositions. The millions of dollars that have been expended thus far in stamping it out could have been used for public buildings or for river and harbor improvements. The gipsy moth is another pest that has cost the people of this country millions of dollars. It seems that we have had so much experience with these insect pests that every effort should be made by law to prevent their being brought into this country.

The CHAIRMAN. We would be glad to hear you on the quarantine part of it.

Mr. KAHN. The measure provides for a strict inspection of all the nursery stock that comes into this country. We feel that the Department of Agriculture, through a horticultural commission, should be given every possible power to keep out of this country nursery stock that may be infected or that comes from infected sections of the world. A most thorough and rigid examination should be made, and the doubt should always be resolved in favor of the Government. The men who have their money invested in the

orchards of this country should get adequate protection for their orchards, and infected stock should be quarantined and destroyed. Now, I have a great deal of sympathy for the nurserymen who are trying to conduct a legitimate business, but they are not always as careful as they ought to be, and it is exceedingly important that the Government should be given full authority to examine every bit of stock that comes into this country, and wherever the stock indicates that it is infected it should be destroyed. There should not be any question about it. I think this legislation will work a world of good. I don't think that any legitimate business is going to be injured, and I believe the people of this country, especially the men who are in the business of raising fruit and ornamental trees, the men who are orchardists and florists and viticulturists and horticulturists, are universally in favor of this legislation. I sincerely hope that this committee will report it out favorably.

Mr. SIMMONS. Some of the importing nurserymen desire to amend this bill to make its operations apply only to insect pests that are new to this country. Do you think that would give the protection that is needed?

Mr. KAHN. No, sir; every bit of nursery stock that is infected with any kind of a pest, whether it is new or not, should be kept out. It may be old to one section of the country, and yet the stock may go into a section of the country where it has never been introduced before. By permitting infected nursery stock to come in it might be shipped subsequently into sections of the country free from the pest.

Mr. SIMMONS. That is important, to prevent it from being introduced from one country into another section and from one State into another State?

Mr. KAHN. Exactly.

Mr. RAKER. Ought we not to have the same regulations from State to State, by interstate commerce, in regard to the quarantine?

Mr. KAHN. I think the bill provides for that.

Mr. RAKER. No; isn't that——

Mr. KAHN. I understood that when this bill was up before——

The CHAIRMAN. You haven't seen the amended bill, so as to be able to speak on it?

Mr. KAHN. No. When it was up before the delegation, with the representative of the Department of Agriculture, it was deemed advisable to quarantine from State to State. If there is infection in any one State, the other States in the Union ought to be protected.

Mr. MAGUIRE. That has been compromised out of this bill.

Mr. KAHN. I think it ought to be put back into the bill. I think the various States of the Union ought to be protected. If there is an insect pest in California that is not found anywhere else, I think it ought to be kept in California until it can be stamped out.

Mr. HAWLEY. And you think the same regulation ought to apply as to infected live animals?

Mr. KAHN. Exactly so.

The CHAIRMAN. Evidently you haven't examined the bill that proposes to amend this bill.

Mr. KAHN. No.

The CHAIRMAN. It amends this bill in two or three particulars.

Mr. KAHN. I didn't know the number of the bill, but I saw a copy of the bill that was prepared in consultation with our delegation. It was submitted to us for suggestions; and that bill, as I remember it, had a provision that infected stock found in any State should be quarantined and stopped from entering another State.

Mr. RAKER. That is entirely eliminated from the present bill.

Mr. KAHN. I don't know how that was dropped out of the bill, but the committee can easily put in an amendment, and I personally would favor such an amendment, so that if there is an infection in any State, the infection shall be confined to that State until the insect or the pest can be wiped out, or until the flower or the fruit disease can be wiped out.

The CHAIRMAN. You are satisfied that the committee will consider that whole proposition?

Mr. KAHN. I am satisfied with that; and I want to say at this moment, Mr. Chairman, that I greatly appreciate the attitude of the committee in having made an appropriation in the agricultural appropriation bill for the stamping out of the Mediterranean fly in Hawaii. I believe that you are helping to perform a very excellent piece of work, and my personal relations with the members of the committee have always been so cordial, and I know them so well, that I need hardly say that I have every confidence, and the people whom I represent have every confidence, in the committee and its desire to do what is best for the fruit and agricultural interests of the country. That goes without saying.

The CHAIRMAN. I only regret that the full committee is not here to receive your nice compliment.

Mr. KAHN. We from the West appreciate exceedingly what your committee has done, Mr. Chairman.

Mr. MAGUIRE. Have you examined anything at all into the experience of other countries? I presume only in a general way.

Mr. KAHN. In a general way. I doubt if there is any section of the world that has gone further in the way of putting up barriers against the admission of insect pests than my own State, and yet we have had serious trouble from time to time, owing to the fact that there is no national quarantine law. I remember probably 15 or 20 years ago the phylloxera got into our vineyards. Of course, that was a pest that was brought from France, and it destroyed the entire grape industry in one of our very fertile valleys. The people of California have had a very large experience with insect pests, and having such a great interest in the cultivation of fruit trees and flowers, they are naturally vitally interested in all legislation that attempts to protect the fruit industry of this country.

Mr. SIMMONS. How much is the State spending annually to protect your interests?

Mr. KAHN. I suppose approximately $1,000,000 a year. Some of the best-known entomologists have graduated from our State into various sections of the world; they did such excellent work in California that they were offered and have received increased pay from other localities. You will find entomologists who received their first experience in California employed in many sections of the world.

Mr. MAGUIRE. Have you carried that appropriation in California very long?

Mr. KAHN (to Mr. Mills). How long has that large appropriation of ours been going on, Mr. Mills? I was a member of the California Legislature in 1893 and we were appropriating then for our entomologists to enable them to find the parasites that were the natural enemies of such insect pests as we had in the State at that time. I think it was the entomologists of California who found the ladybug that killed the cotton cushion scale. We have done a great deal for ourselves; but I want to say that our experts go to great extremes without real warrant of law in the protection of our horticultural industries. They go aboard the ocean-going vessels that come into our ports. There is no law which permits them to go on board those vessels to examine the packages of the passengers to see whether they have any fruit coming from other places; but, Mr. Chairman, they do it, although there is no law that allows them to do it; they do it simply because the passengers are willing to submit to the investigation, and the steamship companies allow them to make it.

Mr. RUBEY. Your colleague told us the same story about the orange again this morning.

Mr. KAHN. Well, we have just heard of the case of a mango that was in the hands of a sailor. The mango was brought over from Honolulu. The sailor came off the ship and had it in his hand. He dropped it on the wharf; it burst open and 15 or 20 maggots began to crawl around. For a couple of weeks the entomologist scrubbed that particular portion of the wharf every day with some kind of acid so as to kill off the grub in case any escaped maggot should develop into a grub. That shows the fear we have of these insect pests. It is a very easy matter to spread the pest, and a single fruit brought in serruptitiously can cause enormous damage.

Mr. HAWLEY. Before the next gentleman speaks I would like to make a remark. I have here an article by Charles Lester Marlatt, of the Bureau of Entomology, United States Department of Agriculture. Speaking of the gypsy moth, it came into Massachusetts, Connecticut, New Hampshire, Rhode Island, and Maine, and it has recently been brought into this country.

The gypsy moth is one of the worst forms of pests of Europe. It was accidentally introduced into Massachusetts 40 years ago, and has now spread to the adjacent States of Connecticut, Rhode Island, New Hampshire, and Maine. It has been recently brought into this country on imported stock and taken to such isolated points as Louisiana and Ohio. There is great risk of its becoming distributed over the entire United States. It has already cost in New England, in mere effort at control, a good many millions of dollars, and should it become wide spread in the United States the damage from it would be beyond calculation. Every effort should be made to prevent a further introduction of this and equally serious forms of pests from Europe and Asia.

And on speaking of the brown-tail moth, he says:

> When it is realized that the brown-tail moth has already been distributed on imported nursery stock throughout 22 States during the last two years the danger to the whole country is sufficiently apparent.

I would like to ask Dr. Marlatt if he remembers the names of those States?

Dr. MARLATT. I can't remember so many States. But most of the States east of the Rocky Mountains and as far west as Iowa, as far south as Louisiana, and a great bulk of them going into New York and Ohio.

Mr. HAWLEY. A disease that is old in one part of the United States may be entirely new to another, and may be spread through other parts by this importation.

The CHAIRMAN. I think we understand that. Two or three gentlemen have been in my room and told me about that.

Dr. MARLATT. The compromise which we have agreed to with the nurserymen has not ruled out protection on shipments made from one State to another altogether. Just as to insects established in this country. We have been laboring with our nurserymen friends here, and I think we have about agreed to go back to the working which will allow us as well to take the gypsy moth.

Mr. SIMMONS. Mr. Mills, of California, is here, Mr. Chairman, and would like to be heard. He wants to go away.

Mr. KAHN. Mr. Mills has come on especially to be heard on this bill.

STATEMENT OF MR. JAMES MILLS, RIVERSIDE, CAL.

Mr. MILLS. Mr. Chairman and gentlemen, I come to you as a man who is working in the horticultural interests of this country, who is confronted and has been confronted with these problems for the last 20 years, and knows full well the enormity of the burden and the tremendous nature of the damage that is wrought in our orchards in our own State and throughout the United States. I come to you as superintendent and manager of 3,500 acres of citrus groves, the largest unit in the West and, perhaps, in the world. I come to you from the citrus region, representing 90 per cent of the citrus culture of the West, which is 125,000 acres of land, with an investment of $175,000,000 and supporting 150,000 souls. I come to you from the recent convention of the fruit growers of California, assembled at Santa Rosa but very recently. And I hope, gentlemen, that inasmuch as I have come so far for this sole reason that you will give me a patient hearing.

I am gratified beyond measure to find the committee so much more inclined toward protecting the great interests of agriculture and horticulture than I was led to believe that you were willing to give us. I need not tell you how great is the interest that is asking for protection—a protection that has been refused us apparently, and I think largely because we have not come here and submitted our case to you—a protection which, had it been given us some years ago, would have availed very much in relieving us of very onerous burdens, and burdens which I personally know have driven to the wall thousands of men who have not had the courage, and who have not had the means, and who have not had the energy to prosecute to the end, to fight against the pests that have been introduced into this country by the importing nurserymen.

We come here willing and ready to accept any compromise that the department might see fit to give us, or give to the nurserymen, if you would not give us adequate protection absolutely. Protection against the countries from which these disastrous pests are be-

ing brought to us—countries which in every instance have quarantined against us—as France, Holland, Switzerland, Germany, Austria-Hungary, Turkey, and England, and all of the colonies of these people, have given absolute protection against us, and we, as it has been said by one of the Government officials, have become the dumping ground for the nurseries of Europe. That is true. Had we had protection, it would have availed this: The cotton moth is costing us to-day—we fruit growers—$16,000,000 annually, and it is an imported pest. The San Jose scale, which came from north China, is costing us $10,000,000 to-day. The Hessian fly is costing us from $50,000,000 to $100,000,000 because of its depredations on our wheat crop, and the boll weevil, but recently introduced into this country, after a careful analysis of the situation, has been said to cost us $25,000,000 annually. These are but a few of the burdens which have been placed upon agriculture and horticulture by the importing interests of the country. Over a series of years, by consultation with growers and by careful analysis by Government experts, it has been found and determined that the agricultural and horticultural interests of this country are involved in a loss directly because of the importation of these pests amounting to billions of dollars per annum. We come to-day believing, and I feel assured from the sentiment around this board, that we will get that adequate, that absolute protection which our great interest demands.

These are but a few of our various troubles. It mentions not one of those that we are up against in California. The gentleman to my right, Congressman Raker, said to-day that a gentleman in California spent $25,000 a year in fighting one pest. I am here to say, Mr. Congressman, that the material alone for the fight last year cost my people $25,000, and that only on a few small areas; and this was only one of the very many outfits contending against the difficulties that confronted us.

We have added to many of the pests—in California we have the red; and if the red be left for one or two years in California, it will sweep through our orchards as if a fire had gone through them. I remember only five years ago telling my fumigating foreman to dump a certain grove and go to another section of our large plantation. He went there and worked for three months, and when he came back they were as I tell you, as if fire had been placed under them, all denuded of their vegetation, all of them losing their crop, and a tremendous injury had accrued in there. The red, the yellow, the black, the brown, and the purple, and there are already many others as well, will mean grievous trouble.

Mr. RAKER. You mean scales?

Mr. MILLS. Yes, sir; these are scales which we can control, gentlemen, and you will realize there is a great difference between a scale which adheres to the tree and which we can destroy by covering the tree with our big tents. We use great tents, 30, 50, and 70 feet in diameter, which are thrown over our trees, and we place therein cyanide of potassium, and sulphuric acid, and water, to create a gas which will kill a large portion of them, but only a large portion of them, as it is absolutely impossible to eradicate many of these scales, absolutely impossible. The fight is here and is on and will remain with us forever.

Mr. RAKER. Is that scale impossible to remove?

Mr. MILLS. Some of them—not all of them. Now, these scales, the yellow, Congressman Kahn, caused us citrus growers alone $1,000,000. The pear thrip has cost your section around the bay $3,500,000 a year since it came in there. We have added to our troubles now the Argentine ant, which has destroyed the groves throughout the South, in Louisiana, and it has gotten to California. It was one of the most grievous troubles that ever confronted us. We have not yet learned how to control it.

Now, you have been told repeatedly about the gypsy moth and the brown-tail moth. This bill as drawn gives the nurserymen the right to introduce this pest and distribute it to any portion of the United States, because, forsooth, it is here now. It is here now. We in California quarantine even against our sister counties, against any pests that they have which we have not, and we have been able to keep out the pests in the adjoining counties for 10 years or more by a strict quarantine against those counties. I need not tell you of the tremendous damage that has been caused to our foreign trees. Prof. Marlatt has told you that our foreign trees and our orchard trees and our ornamental trees have been damaged, which has caused the people of New England now a damage of $1,000,000, and that the United States Government has contributed $300,000 for wayside trees alone. What will it cost? The damage which is being caused to our trees is incalculable, but what will the damage be when this great pest has been distributed in all of the forest areas of the West? Go to Oregon and Washington and California and Hawaii, in all of the Western States, and put this pest—and it will most assuredly get there, Mr. Chairman—and the damage will be so great that the estimated damage by reason of scale, pest, worms, and our difficulties will be over $1,000,000,000. I think that is right Mr. Marlatt, $1,000,280,000. The damage from the moth will be far more than this, because they are sweeping entirely the forests of the West. If it can be stopped now from further distribution it will be a blessing, and it behooves you gentlemen to solicit the aid of Congress to stop the introduction of these pests, or any pests such as these. The great increasing commerce of the West, ever increasing, with China, Japan, and the islands of the sea, and the southern archipelago is such that we are likely to have introduced into any port of the West serious damage, as great or greater than the damaging pests that have already been introduced from northern China and elsewhere. The Mediterranean fly worm may come from New Zealand in a shipment, and it may come from Australia; but there are now seeking entry and are liable to be brought into this country in shipments of ornamental stock or by accident, from northern China, pests that are as great as the San Jose, which was introduced from that section and distributed by the nursery business years ago, and that is costing us—this Nation—$10,000,000 annually. There are many, as Dr. Howard and Dr. Marlatt will tell you, just as serious pests seeking entry from those sections as the San Jose scale.

Dr. Marlatt has told you to-day a most marvelous fact—that the amount of business being carried on by the nurserymen in spreading these pests, declared at the customs, is only $350,000—only $50,000 more than the United States Government has been com-

pelled to give to the New England States affected by the one trouble introduced—and that very trouble, by reason of these importations, has been spread into 22 other States.

I need not dwell upon this, Mr. Chairman and gentlemen. You know what it means to the great forest areas of this country and to the great horticultural interests of this country, to the magnificent trees that are bordering our streets in the cities and along our roadways. Need I call your attention to the fact that an imported pest has destroyed the historic elm of Cambridge, and that 17,000 chestnut trees have been destroyed in one part of Brooklyn by reason of an imported pest, and which threatens and will surely destroy all of those magnificent ornamental trees that have graced the avenues of our cities and parks and of our Commonwealth and cities?

I looked for information on these nursery introductions, and I found in 1900 that the nurseries—this was the last report that has been tabulated—that the nurseries amounted to $11,400, that the bulb plants amounted to $1,000,000 and some hundred thousands, and the other declarations at the customs amounted to some hundreds of thousands of dollars, and $2,361,000 was the total. I find that in 1908 there was imported—I find it in the book issued by the Government giving importations of nursery stock, and I presume it is authentic—nursery stock, on page 46 of Bulletin No. 74, Importations of Farm Products into the United States——

Mr. HAWLEY. Of the bureau?

Mr. MILLS. Of the Department of Agriculture, Bureau of Statistics, Bulletin No. 74, Importations of Farm Products into the United States, from 1851 to 1908. In 1908 the entire nursery stock amounted to $2,000,000. This is including the nursery stock as declared at the customs, as told you by Dr. Marlatt, $350,000, and this includes orchids, bulbs, and plants of all descriptions, and seeds, as well as under the head "Nursery stock."

We have, then, nursery stock to the extent of $350,000, and we have as the damage of one pest alone, the gypsy moth, amounting—it has not been calculated as yet the amount of damage to the New England forests, and we will yet have to calculate the amount of damage to the forests in the 22 States to which it has been distributed recently. But we have as against this an expenditure of $1,300,000 in New England to combat one pest alone. We have against that an industry in agriculture and horticulture which aggregates something over $7,000,000,000. The question that we feel like asking, we who are tilling the soil, we who know the burdens that have been saddled upon us, who know the struggle, and who know how many have gone down in the struggle, who know how many mouths have had to go with less food because of this struggle, who know that the damage is constantly occurring and must and will increase the cost of living beyond the tremendous cost already in this country, we ask this question: Can this continue? Will Congress afford us that absolute protection which the man who by the sweat of his brow earns his living at the tilling of the soil and behind the plow? Gentlemen, I speak from experience, because with the shovel and the hoe I have worked for a living at $1.50, and I know how urgent is the battle. I know how hard is the battle. I know it has cost 10,000 times 10,000 of my fellow workers to combat the tremendous damage that has

been worked because our Government has not come to us with that assistance which we were entitled to, gentlemen.

But let me tell you of our trouble with this Mediterranean fruit fly. I have it here. Here are some of the photographs. I want to quote to you.

The olive business is a large business in California, but it will become very, very much greater. I go back to California to set out for one company 1,000 acres of olives; but we hesitate in doing so, and in discussing it the other day, because of the danger there is from this olive fruit worm—the Mediterranean fruit fly. I will give you the melon worms, in Hawaii, which attacks the melon, the tomato, the string bean, cucumbers, squashes, and melons. They have counted as many as 79 maggots in one tomato.

Mr. Carnes has told me the story that Congressman Kahn told you about this mango dropped on the wharf at San Francisco. You will see that 79 maggots may be in one tomato or in one mango. I will quote you the statement made by a professor in college in Hawaii, so that you will appreciate the greater difficulty that confronts us there. Recently there was offered in the port of San Francisco a shipment of 1,500 cases of alligator pears infested with this fruit fly, and the danger is that these will be sent through our State into New Mexico, Arizona, or any of these other States on our border and be left free and come away again; and in this respect let me answer the question that was asked by the gentleman on my left here: Do all the States have an efficient quarantine service? No, sir. It is only very recently that California got a law passed requiring our horticultural commissioner to examine all of these fruits as to their fitness. I myself was on a committee for that legislation for six years, and it took us six years to get legislation so that we would have efficient men. I doubt if there is another State in the Nation—we have been confronted with dishonesty among our own officials. The minor ones have let pass by them shipments that were infested. If you let these pests come in and go into the several States, you will be confronted with that very condition, because there are probably not six States in the Nation where the experts are expert, and are efficient, and can tell the pests that are on the stock, even if they are honest enough to stop it if they know. The blister rust of the pine, which the doctor says will be three years before it can be discovered, and after it gets onto the trees destroys your fine forests. The seedlings are affected with a fungus disease that can not be found.

I just want to read an extract from a lecture by Prof. Severin, of the College of Hawaii:

[Extract from a lecture by Prof. Severin, College of Hawaii.]

I shall not enumerate all the fruits from which the Mediterranean fruit flies have been bred at the College of Hawaii, but simply mention those that have not been listed by the board of agriculture. In an article published by the board of agriculture, it was stated that common papayas when found overripe on the ground are attacket by the Mediterranean fruit flies. We have bred the Mediterranean fruit flies from papayas taken from the trees. The Mediterranean fruit fly has been bred from seven papayas taken from threes and a number of papayas taken from the ground. I admit that some of the papayas taken from the trees were bruised, others overripe, but I will not admit that all of them taken from the trees were bruised or overripe.

Let me tell you how we happened to discover that the fruit fly was breeding in papayas. Four students went out in the field with me. During my absence three of the students decided to have a little feast on papayas. Mr. Fook On cut the end of a fine-looking papaya and was surprised to find an almost fully developed maggot wriggling about in the papaya. Do you suppose the student would have selected a bruised papaya or an overripe specimen. Not much. They selected the finest looking specimens they could find. After a little reflection it occurred to me that this maggot may prove to be the melon fly, but without exception every infested papaya gave birth to Mediterranean fruit flies. The largest number of pupæ counted from one papaya was 121.

A fruit not listed by the board of agriculture, from which we bred 35 fruit flies, is the grapefruit.

Recently one of my students called my attention to the fact that the fruit fly had stung green umbrella-tree nuts. It is usually reported that the eggs of the fruit fly will not develop in green fruit, or, if they hatch, the young larvæ perish almost at once. It strikes me that here is an important problem. Can the eggs of the Meriterranean fruit fly remain dormant, latent, i. e., do not begin to develop until the fruit ripens?

Mally counted 10 eggs after the act of oviposition of a fruit fly. In an umbrella-tree nut I counted 42 eggs in a slight depression caused by the stinging of the fruit fly. There were 18 depressions caused by the fruit fly's ovipositor in this nut, and if all contained 42 eggs there would have been 756 eggs in that single nut. In all probability most of these maggots, if not all, would perish on account of lack of food. In one nut well advanced in decay I counted 72 maggots.

Interisland inspection.—What precaution is California taking to prevent the fruit fly from getting into that State? All hand baggage is searched at San Francisco, and California has no law at present to back them in this movement. An arrangement has been made with the steamship companies in which the passenger who buys his ticket to San Francisco practically agrees to have his baggage searched at San Francisco. If California has made such an arrangement, why can't we in Honolulu make a similar arrangement with the Inter-Island Steamship Co.?

At the present time the interisland inspection is a complete failure. I tested this matter a number of times. Some time ago I was working in an orchard and I gathered a gripful of oranges infested with the Mediterranean fruit-fly maggot. I boarded the interisland steamer; there was no inspector at the gangplank to ask me any questions. It was not a question of dodging the inspector and slipping aboard. I came down the gangplank and I noticed the inspector chatting with some friends. I kept my eyes open. I noticed a number of passengers entering the steerage. The inspector got busy and ran his hands over their handbags and then returned to resume his chat with his friends. Finally he took his station at the gangplank. Small boys carrying packages, suitcases, grips, etc., boarded the steamer continually, but no questions were asked. I could tell you more, but that is enough to show that the interisland inspection is a farce.

It was no surprise to me to learn that the fruit fly has recently established itself in Molokai. With this method of inspection, it will not be long before the fruit fly will establish itself on all the islands. If California has prevented the melon fly from entering California, which has been on these islands for 20 years, why can not we protect our sister islands by starting an efficient quarantine department?

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On account of the abundance of rain in Manoa Valley, a deep can 3½ inches in depth, 11 inches in diameter at the bottom, and 13 inches at the top was used. A white enameled can was selected simply because most insects captured in the kerosene show up better with a white background. Eleven cans of this size were fastened into orange, grapefruit, lemon, plum, and guava trees. Enough kerosene was poured into each can to cover the bottom. After a heavy rain the kerosene is just as effective, because the kerosene floats on the surface of the water.

No fruit flies were observed walking down the trunk of a tree into the kerosene, but all flew to the kerosene cans. Many were seen at rest on the sides of the cans, and they often sat perfectly quiet for a long period of time; others would run along the sides of the dish. They may take wing and fly off to a leaf or branch, or in their zigzag flight over the surface of the oil they may come in contact with the kerosene and are killed in less than a minute.

Following is a summary of results for a period of 35 days, or 5 weeks, in which this experiment was carried on:

[Only two traps under two citrus trees.]

	Male.	Female.
Oct. 8-10, 2 days' catch	683	2
Oct. 10-12, 2 days' catch	631	.....
Oct. 12-14, 2 days' catch	454	.....
Oct. 14-17, 3 days' catch	734	3
Oct. 17-21, 4 days' catch	1,090	1
Oct. 21-25, 4 days' catch	1,150	.....
Oct. 25-29, 4 days' catch	1,622	6
Oct. 29-Nov. 2, 4 days' catch	986	3
Nov. 2-5, 3 days' catch	951	2
Nov. 5-8, 3 days' catch	491	7
Nov. 8-12, 4 days' catch	1,411	12
Total	10,203	[1] 36

[1] Probably accidental deaths.

Total catch, 10,239.
Average catch per day: Female, 1; male, 291; total, 292.

The present quarantine bill, known as the Simmons bill, and now under consideration, is in many ways an admirable one and much to be desired, if your honorable committee does not see fit to report a bill giving the agricultural and horticultural industries absolute protection from the introduction of those extraordinary dangerous pests already somewhat distributed throughout the country and the many others as dangerous now seeking entry at our ports and sure to gain a foothold in this country through the importation of nursery and other stock unless some drastic means is taken to prevent it.

What might have been saved to the agricultural and horticultural industries if absolute quarantine protection had been given years ago can be seen by noting the great damage that has been wrought to the industry by some of the pests already introduced.

Codling moth has caused $16,000,000 loss annually; San Jose scale caused $10,000,000 loss annually; Hessian fly caused $50,000,000 loss and on occasions $100,000,000 loss annually; boll weevil caused $25,000,000 annually.

Careful estimates from crop reports and actual insect damage over a series of years shows the damage to farm products, including fruits and live stock, to $100,000,000 loss annually; boll weevil caused $25,000,000 loss annually.

In addition to the above, the Argentine ant has now gotten a foothold in Louisiana and is destroying the orchards there, and it has, as well, reached the California citrus region. The gypsy moth and the brown-tail moth have caused incalculable damage to the shade, orchard, and forest trees of New England, and within the last three years the gypsy moth has been distributed by the introduction and shipment of foreign nursery stock to 22 States of the Union. The Federal Government is now appropriating annually $300,000 to spray trees along the highways in New England so that the caterpillar will not be distributed throughout adjoining territory by carriages and automobiles traveling along the road. In addition to this large sum, the New Englahd States are annually spending, to fight this one pest, $1,000,000. What will the cost be if a similar expense will be entailed by reason of its introduction into 22 States? Will the Federal Government appropriate $300,000 annually for each of the States and will each State have to appropriate another $1,000,000 to fight the pest in its territory?

The entire value of imported nursery stock, as declared at customs, which is thus menacing the safety of this country, is stated to be $350,000, only $50,000 more than the Federal Government is now appropriating annually to assist in the effort at the control of the gypsy moth, and this alone in New England States.

The alfalfa weevil has been introduced into Utah but recently through the shipment of nursery stock. This pest has destroyed hundreds of alfalfa fields and is now spreading itself throughout all adjoining territories. Without question it will spread to all alfalfa-growing sections of the West. It can not be controlled and therefore the damage that will be wrought is beyond estimate.

An adequate quarantine protection would have saved the country from this, another dreadful pest, a pest which, by destroying the alfalfa field, will increase the cost of feeding stock and in consequence will increase the cost of living with the necessary result following that many will not be able to get as much food for the dollar. All of these pests that we have, and all others that we will surely have if absolute protection is not given us, by adding enormously to the burdens of the tiller of the soil must and will necessarily be reflected upon the cost of living. Perhaps it will be said that we can go elsewhere and procure the goods if, because of the damage wrought, the price of fruit and vegetables is increased. Yet would it not be better to assist the farmer to produce the goods at a less figure, which he can do if he is saved from the destroying effect of predacious insects and fungoid troubles?

The pests already here we will have to put up with and fight as best we can at whatever cost, knowing full well that the fight will continue forever and at great cost; yet there are others we fear as much because of the damage that they will do us, and they are even now knocking at our doors.

THE OLIVE FRUIT WORM OF THE MEDITERRANEAN; THE MEDITERRANEAN FRUIT FLY; THE MELON WORM; THE MORELLOS MAGGOT OF MEXICO.

The olive is now a large industry and is very fast developing into a greater industry, and will shortly become a very great industry in the State of California. It should be protected from this serious pest. How can this protection be given unless shipments of stock are stopped at the port of entry and not allowed to proceed to destination?

The melon worm.—This pest attacks the melon, tomato, string beans, cucumbers, squashes, mangoes. Mr. Bremner, of the California Horticultural Quarantine Station at San Francisco, has counted as many as 79 magots in a single tomato.

The Mediterranean fruit fly.—This pest is now found on three islands of the Hawaiian Group—Oahu, Kaiu, and Molokai.

Mr. E. K. Carnes, of the California horticultural commission, bred this pest from the following fruits: Peaches, figs, grapes, rose apple, star apple, mangoes, white lemon guavas, wild guavas, strawberry guavas, alligator pears, papaya, sopota, carissa, aruina, (a South African fruit), string beans, peppers.

Mr. Carnes told the writer that one of the longshoremen dropped a mango on the wharf in San Francisco. The worms immediately began to leap about the wharf and bury themselves in the cracks and crannies of the timber. For two weeks the commission continued to search for these maggots. The wharf was scrubbed with sulphuric acid and cyanided, so anxious were they to destroy every possible maggot. Recently, I am advised by the commission, 1,500 cases of alligator pears were received in one shipment at the port of San Francisco and directed to an interior point. These were infested with the worm and had to be destroyed.

T. W. Kirk, of the New Zealand Department of Agriculture, says: "In western Australia and New South Wales nothing has been found of any use against the fly. At the Cape of Good Hope the only successful method has been that of covering the fruit with mosquito curtain whilst the fruit is ripening, and we have had to burn consignments of the following fruits because they were infested with the dreaded maggot: Peaches, cherries, mangoes, pineapples, persimmons, oranges, grenadillas, apricots, pears, shaddocks, tomatoes, plums, bananas, figs, nectarines, apples, mammee apples, loquats, mandarins, and maupi fruits."

Quoting further from Kirk: "The government of western Australia bought all the fruit in an infested district and had it all burned, in the hopes of stamping out the pest. The next year the fly appeared quite as numerous as ever. This because it was impossible to destroy all the wild fruits and berries."

Mr. E. K. Carnes states that it can not be exterminated in the Hawaiian Islands for the very same reason.

Mr. Lee (Insects and Fungous Pests of Orchard and Farm, Tasmania) says: "In some parts practically destroys the entire crop."

The annual report, 1908, department of agriculture, New Zealand, T. W. Kirk, biologist: "This destructive pest is most commonly found in imported fruit, and no variety seems to be immune from its attacks. The latest of its hosts has been shown to be figs. A consignment of figs was condemned on its arrival at Wellington, and from 17 figs 241 flies were bred out."

Extracts from a lecture by Prof. Severn, College of Hawaii: "The largest number of pupæ counted from one papaia was 121. * * * A fruit not listed

by the board of agriculture from which we bred 35 fruit flies is the grapefruit. * * * Recently one of my students called my attention to the fact that the fruit fly had stung green umbrella tree nuts. * * * Mally counted 10 eggs after the act of oviposition of a fruit fly. * * * In an umbrella tree nut I counted 42 eggs in a slight depression caused by the stinging of the fruit fly. There were 18 depressions caused by the fruit fly's ovipositor in this nut, and if all contained 42 eggs there would have been 756 eggs in that single nut. In one nut well advanced in decay I counted 72 maggots."

Twenty-eight days' cycle.—If this pest gets a foothold in California, what?

Damage.

Quarantined by other States.

Shipments may pass through to New Mexico and Arizona, and, if fruits infested there, will most certainly spread in all directions. Here is one of the serious problems that confronts us if we fail to examine at the port of entry.

The morellos maggot.—Prof. Herrera says that one progenitor may leave in one season 1,500,625 descendants, and he says, further, one great circumstance which prevents the plague from spreading is the fact that the greater part of the wormy fruit is exported to distant places—Canada and Northern States.

The pine blister rust.—Damage that will result: May exist in nursery stock for three years and not be discovered; how serious the menace; has already reached portions of this country and Canada; effort made to stamp it out.

Potato wart.—Seriousness: Our ever-increasing commercial intercourse with the Orient, Pacific Islands, and Australia makes the danger exceedingly grave. Many pests there are infesting nursery stock and orchard trees in China and Japan, as well as the other countries mentioned, and they will certainly reach our shores if adequate protection is not given to our interests. There are in the Orient other pests as serious as the San Jose scale and which will cause as great damage to us as the San Jose scale if they gain entrance to our shores. The latter scale has cost us $10,000,000 a year. Our burdens now are about all we can bear and succeed with our industry. We should not be further crippled. Every protection possible should be given us in order that we may be able to compete successfully in the struggle for existence. The European countries from which nursery stock is now being imported, namely, Austria-Hungary, Turkey, France, Germany, and Holland, have quarantined against all importations of nursery stock from us. England and all British colonies, as well as the colonies of the above-mentioned countries, have quarantined against us and against one another, thus making the United States the dumping ground for all infested stock. This should not be so. We should have equal protection with others, and especially against those who quarantine against us. As stated above, the total value of all importations of nursery stock is infinitesimal compared with the industries so greatly damaged by the introduction of infested stock; aye, and as compared with the amount of money spent each year in the endeavor to control the damage caused by the pests introduced into the country on these shipments of nursery stock. As stated above, the total shipments of nursery stock as declared at customs was $350,000.

Cost of fight and loss	$1,000,000,000
Agriculture is credited with producing an annual crop	7,000,000,000

The citrus industry in California has invested in it about $175,000,000. One hunderd and fifty thousand people are dependent upon it for their living. Between $30,000,000 and $40,000,000 are produced each year. This industry at present has many pests to contend with, including the red, yellow, purple, black, and brown scales, the Argentine ant, the mealy bug, the thrips, and many diseases. We should be burdened with no more.

The census of 1900, Agriculture, Part II: Value of fruit crops.

	United States.	California.
Orchard	$83,151,840	$14,090,930
Grapes	14,090,877	5,622,925
Small fruits	25,030,877	911,411
Subtropical	8,549,863	7,219,082
Total	131,423,517	28,280,104

The citrus industry alone now amounts to more than the total for California 10 years ago.

He tells us that he counted 42 eggs at one depression where the ovæ had pierced the nut, and he counted 18 depressions which would give somewhere over 700 eggs in the one nut. It is true they would not all develop for the lack of food, but he did count 72 maggots in one umbrella nut. Nothing escapes the Mediterranean fruit fly.

We have on our southern border a fruit worm which is seeking to enter into our State. It is just another trouble like the Mediterranean fruit fly.

We need a comprehensive and an adequate and absolute quarantine bill, so that the enormous interests of agriculture and horticulture will get that protection which they are entitled to. We in California hope sincerely that in your consideration of this measure, through your wise action, your courageous action, at this time, there will not be brought into this country any more dangerous pests loaded down with burdens which will be more than we can bear.

Mr. HAWLEY. This fruit worm that you speak of, is it spread by a fly?

Mr. MILLS. Yes, sir; it is spread by a fly.

Mr. KAHN. It goes through the oranges?

Mr. MILLS. Prof. Herrara, of Mexico, said that he counted 70 eggs in one female. I believe that one progenitor will give 1,500,000 flies in one season. It breeds every three months. The cycle of this fly is 28 days. It touches everything.

We to-day, Mr. Chairman and gentlemen, are sending our quarantine force to Honolulu, not being satisfied to protect ourselves in the port of San Francisco; we are sending our force to Honolulu and the Honolulu government is cooperating with us; and recently we had a special session of the legislature to give us extra funds so that we might efficiently fight the battle on the wharf in Honolulu. Unless we get that protection which we are seeking and which you feel disposed to give us—and I sincerely hope will give us—we will have burdens from which our industry will have very little chance to survive.

Mr. MAGUIRE. Have you any idea about how much it would cost to put this bill into effect—in adequate operation, so that it would grant you relief?

Mr. MILLS. If the bill is passed so as to quarantine foreign countries as we are quarantined by foreign countries. If the bill will be passed so as to allow them to introduce nursery stock and have it examined at the port of entry, then it will cost considerable. But the cost will be a very small item compared to the damage. You have only got to see and know the damage already wrought to realize that the cost of protecting us will be very, very small, if you place it over against the damage that will be wrought by the further introduction of pests like the brown-tail moth, like the gypsy-fruit fly, and the coddling moth, the San Jose scale, and all of them, causing a damage of more than $10,000,000.

Mr. MAGUIRE. Do you think it ought to be administered through a commission?

Mr. MILLS. Well, I belive that that idea is a good one, and particularly because of the fact that it will cost no more. If it should cost a little, it should not hinder you from urging the bill.

The CHAIRMAN. The commission would simply be a commission appointed——

Mr. MILLS. By the Secretary of Agriculture.

Mr. RUBEY. The bill provides for an inspection of imports at the point of destination, but not at the point of entry.

Mr. MILLS. Yes, sir; that is a very serious error. It is a very serious mistake, for many of the pests will get in in that way. We had introduced in three places in California from Florida a fly, because of the fact that our experts at that time did not discover it or through venality or through carelessness let it pass through. All of these things combine. If that is allowed to go through that way there is absolutely no question but that further pests will be introduced into the United States which will tremendously burden our industry.

Mr. RUBEY. I wanted to get your view on that point.

Mr. MILLS. I feel myself that they ought to quarantine these things in the foreign lands as they quarantine us. If we can not get that, have them inspected at the port of entry.

Mr. SIMMONS. Mr. Chairman, we have Mr. Eugene Grubb, from Colorado, and one of the largest potato growers in our Nation, and he has come all the way here to attend our hearing, and I am sure he can enlighten us and give us facts on the great danger that threatens the potato industry of the country and the need of this legislation to protect it.

STATEMENT OF EUGENE GRUBB, OF CARBONDALE, COLO.

Mr. GRUBB. Mr. Chairman and gentlemen, I appeared before the committee—I presume some of you remember it—a year ago. I will try and be as brief as possible. I ought to tell you enough in one minute to exclude potatoes from infected districts of foreign countries. When I was in Europe two years ago I studied potatoes from a cultural standpoint for the Government. I ran across a black scab, or black wart, and it seemed so strange that in the case of such a menace to our industry that the potato-growing men in America had never heard of it, although our department had issued a bulletin on that. I immediately cabled to Secretary Wilson—I didn't wait a minute to get to a cable office—asking him to stop the importation of potatoes to America; I was that frightened about my own industry and the industry of the American potato grower and consumer. He answered me that he had no authority to stop any nursery stock or any diseased plant of any kind. And so, when I got back I had our Members in Colorado introduce bills in both Houses in regard to giving us the same protection, the agriculturist, that the Government gave to the live-stock grower. That is all we ask, and on the same lines absolutely, that no country that has black scab or black wart be allowed to ship a potato into this country until they show a clean bill of health; and if not examined at the port of entry and port of shipment and port of destination, that the potatoes from those countries be excluded or quarantined until they show a clean bill of health from this disastrous trouble. I do not care to take your time about the live-stock part of it, but no country can ship live stock of any kind to this country until it has been examined by our own department specialists in Europe and given a clean bill of health.

There is no steamship line that will accept and no breeders over there would sell it, because it would be destroyed on entry here as all countries do. South America has no inspection in Europe, but they have a quarantine there; and millions of dollars' worth of live stock are destroyed in the Argentine Republic at Buenos Aires when they arrive there if found diseased.

So that what we ask in this bill is that all countries be quarantined that have potatoes with black warts or scabs until they show a clean bill of health, and then they have a right here. It is no hardship, and an absolute protection to this country. All of the provinces of the Government of Great Britain exclude them, and the Channel Islands—Jersey—three years ago called a special meeting of their parliament and passed a law against all potatoes from Great Britain, because it was the greatest menace to the greatest industry they had. Canada has quarantined the United States, but we admit potatoes from infected districts.

Mr. MAGUIRE. That is not an insect pest at all.

Mr. GRUBB. It is a fungous disease. I don't know whether the doctor has brought us a sample of the disease or not.

Mr. HAUGEN. How could we manage that?

Mr. GRUBB. By exclusion.

Mr. HAUGEN. Yes; but what would be your idea of discovering that they have this disease—the potatoes over there?

Mr. GRUBB. They do not ask any country in Europe whether they have foot-and-mouth disease, or tuberculosis, or black leg. We absolutely quarantine them—absolutely.

Mr. HAUGEN. How do we find it out under that act?

Mr. GRUBB. We undertook first to rely upon the inspection of foreign countries, and we found they were not reliable. Dr. Salmon and Secretary Wilson secured legislation making an appropriation sending our best veterinarians to all of the countries from which we import live stock, so that we could send our own qualified veterinarians.

Mr. MAGUIRE. It would be far more easy to administer a live-stock quarantine law than it would in the case of a plant disease or an insect.

Mr. GRUBB. I am speaking absolutely only on the potato business. I am not a horticulturist. I am a potato grower. I am speaking now on the black scab. That is included in this bill.

Mr. HAWLEY. It would be the same kind of protection against black-scab potatoes as this against diseased animals.

Mr. GRUBB. Yes, sir; absolutely on the same lines. No man can import any animal into this country until he first secures a permit from the Secretary of Agriculture. Then the animals are inspected by United States department veterinarians kept in those countries by our Department of Agriculture. If found infected, are declared rejected.

Mr. RAKER. Is that scab now in any particular State in the United States?

Mr. GRUBB. It has been in Massachusetts.

Mr. RAKER. Ought we to permit that to remain in Massachusetts alone or be distributed over the rest of the United States?

Mr. GRUBB. The bill that I was instrumental in having introduced last year carried interstate inspection and quarantine.

Mr. RAKER. Does the inspection of live stock carry with it the feature of interstate inspection?

Mr. GRUBB. No; the Federal, except the interstate commerce.

Mr. RAKER. Well, you say interstate commerce?

Mr. GRUBB. If you care to ask me any questions as I go along, it may take less time.

The CHAIRMAN. Is this bill in its provisions satisfactory to you?

Mr. GRUBB. If there is any compromise; no, sir.

Mr. HAWLEY. This bill would not do any good to your potatoes, because it doesn't mention fruits of any kind.

Mr. GRUBB. Yes, sir; it does; it was incorporated in there.

The CHAIRMAN. My purpose was to draw you out and have you differentiate between this bill and the substitute that was put in here this morning. If this bill that is substituted is all right, we don't care to ask you any questions.

Mr. GRUBB. I am afraid if we undertake it in a separate bill we won't get anything, so I am willing to accept. I do not represent anybody but myself.

The CHAIRMAN. You can afford to leave that to this committee.

Mr. GRUBB. I think I will be satisfied at this session, anyway, with what protection you can give us.

The CHAIRMAN. You leave that to this committee.

Mr. GRUBB. I want to take just as little time as I can. We have had evidence enough from the horticulturist to quarantine everything, but just to give you an idea of the diseases that come to this country, and they have all come here—we have originated none of these diseases or pests that I know of. As to tuberculosis, 40 per cent of the dairy cattle in Wisconsin, and practically all over the United States, that have tuberculosis—nearly all of our educational institutions have a hard fight to keep rid of it by the testing and killing of animals. Through the tuberculosis in cattle our hogs have been infected, until it has increased several hundred per cent in five years. Thirty-five per cent of all the poultry killed in Great Britain has tuberculosis, that comes from the cattle and the hogs. This wart is a disease which, when once infected in the soil, takes from six to eight years, either in pasture and meadows or by chemical treatment, to free it from the fungus, so that if ever we get this trouble we will have the same trouble we have had with other diseases; we will never be free from it.

I hope that bill covers the matter strongly enough to include potatoes commercially as well as for seed purposes, because it is from the potatoes that are imported for food that our disease and trouble will come from. Every European country has this disease. Ireland, England, Belgium, Holland, Austria, Germany, and all of those countries that we get potatoes from have this disease. And those potatoes to-day are in every State, practically, except possibly Maine, and from the Rocky Mountains to the Atlantic coast. There will be from 50,000,000 to 100,000,000 bushels of potatoes imported into America this year to feed the people, and from the diseased fields of Europe. The importer has taken them—they are now on sale in Kansas City, Kans., and Omaha, and all interior points in Iowa, and possibly Illinois; Texas is flooded with them, and there is no question but what they will invade the fields of California before another crop is grown, as potato stocks are low there now, and once the soil

is infected in the irrigation districts it will be carried from farm to farm, from the waste water, and the irrigation water, where the waste water runs through the canals, and from the irrigation fields it will be taken onto the lower farms and will be carried by the birds and by the men and by implements and from farm to farm and from district to district and from State to State. The potato is not so much the food of the wealthy as that produced by some of our horticultural friends, but it is the food of the masses; it is the food of the poor people. If affects the laboring man tenfold more than the farmer, because when you take the potato from the masses of the people, you wrong millions of people until eternity in America if this disease once gets into the soils of the potato producer.

The CHAIRMAN. Rich people eat potatoes, too.

Mr. GRUBB. Yes; I know; but the poor people don't eat oranges and prunes and pears, but they are compelled to eat potatoes if they wish to exist. During one potato-disease period in the forties a great many people starved to death in Ireland. If the world didn't have a potato crop the European people would starve to death. There isn't food enough in existence to supply the people of the world without the potato. While it may not apply here, but Germany, not as large as Texas is, grows seven times as many potatoes annually as the whole United States. Great Britain, about half as large as Colorado, grows more potatoes than the United States. Whenever we get any menace to this food of the masses, of the common people—I believe I have told you enough to scare anybody to death.

Mr. MAGUIRE. If I remember, the potato bug originated in your State.

Mr. GRUBB. In eastern Colorado; yes, sir; but it left us to go to a better people, so we do not have it.

Mr. RUBEY. How long has this disease existed in Europe, in England?

Mr. GRUBB. Ten or twelve years or more, but it never became disastrous until three or four years ago.

Mr. RUBEY. It doesn't seem to have destroyed the entire crop over there if England produces more than the United States.

Mr. GRUBB. Its greatest development has come in the last two years. It was a disease that was developed very slowly, as all such diseases are, I understand, but when once it becomes prevalent it is a reportorial disease in Great Britain, so that any person knowing or having any knowledge of the disease anywhere—it is an offense punishable by fine and imprisonment to even have knowledge of it and not report it to the department.

Mr. TAGGART. Is this disease propagated by the infected seed that is planted?

Mr. GRUBB. Yes, sir.

Mr. TAGGART. Or does the germ coming from the disease from the plant being blown or spread over the country?

Mr. GRUBB. I presume Dr. Marlatt is a better authority upon that.

Mr. TAGGART. I didn't mean to ask you a technical question.

Dr. ORTON. It is entirely through the planting of diseased potatoes.

Mr. TAGGART. If the seed is healthy you have healthy plants?

Dr. ORTON. It does not spread through the air; it comes out of the potatoes through the planting of diseased tubers and the presence of the disease in the soil before you plant.

Mr. TAGGART. It is a constitutional disease of the potato?

Dr. ORTON. It is a fungus—a parasite—of the tuber.

Mr. HAWLEY. Can you destroy it by dipping?

Dr. ORTON. No, sir; the fungus is inside of the potato, and it can not be reached by a disinfectant.

Mr. RAKER. Does the disease remain more than one year in the soil?

Dr. ORTON. It remains 8 or 10 years or more in the soil if it once gets there. In explanation of the question the gentleman asked Mr. Grubb as to the distribution of the disease in England; but I would say it is somewhat limited, but has caused some alarm; and the distribution in Germany is also limited.

The CHAIRMAN. How many States has it invaded here?

Dr. ORTON. To my knowledge it has never yet obtained a foothold in this country. It has once been imported into Massachusetts, but, to the best of our knowledge, all of those potatoes were destroyed. We hope it does not exist in this country yet.

Mr. TAGGART. If they do not plant any of these diseased potatoes now, we will not have a continuation of the disease through them?

Dr. ORTON. I hope not.

Mr. GRUBB. My attention has been called to a very important thing. In the first place, the passage of this act so that it should become effective this afternoon if it didn't a year ago, as it should, because the country is now filled with commercial potatoes from Europe, and the farmers are their own worst enemies. They will purloin or steal—maybe you will understand it better if I say steal—the farmer if he sees imported potatoes in a store in Kansas or Texas would absolutely steal them and plant them, because this word "imported" has a magic influence on the American people, and the potato grower wants some that are imported.

I don't know enough about legislative matters to know, but I would suggest to this committee that the passage of this act should be made at the earliest possible date, as, with all due deference to the horticultural and citrus-fruit growers, the importance of this legislation now is paramount on account of our crop being upward of 100,000,000 bushels, short crop, 1911, and we are importing these large quantities from these diseased districts. This law should be made an emergency one, effective at once; and if the Department of Agriculture hasn't got sufficient funds, that some method should be devised of handling this disease, that every paper issued by the department should carry a notice, so that every farmer will try to protect himself from the importation of this year's planting. We suggest to give them enough time to protect them for all time hereafter.

Mr. SIMMONS. Mr. Symons, do you wish to be heard?

STATEMENT OF MR. T. D. SYMONS, STATE ENTOMOLOGIST OF MARYLAND.

Mr. SYMONS. Mr. Chairman and gentlemen: All I would say is that the bill as presented has the indorsement of the entomologists and the association of horticultural inspectors, working in con-

junction with the Bureau of Entomology and the legislative committee of nurserymen. At the meeting in Washington of these associations, this compromise was brought about, and probably you have heard their side of the bill as explained by Dr. Marlatt. Perhaps the legislative committee of the nurserymen have something to say on the amendment you have in view.

Mr. TAGGART. You mean on the amended bill?

Mr. SYMONS. It wasn't a case of preference. I think possibly Mr. Pitkin can speak as to wording of bill No. 18000, as we, of course, as entomologists and inspectors, want to see the State protected as far as possible consistent with legitimate business.

STATEMENT OF WILLIAM PITKIN, OF ROCHESTER, N. Y., CHAIRMAN OF THE LEGISLATIVE COMMITTEE OF THE AMERICAN ASSOCIATION OF NURSERYMEN.

Mr. PITKIN. Mr. Chairman and gentlemen, I represent the American Association of Nurserymen, whose membership extends throughout the country. And at first I want to say——

Mr. SIMMONS. What percentage of those engaged in the nursery business are there in your organization?

Mr. PITKIN. The organization, the attendance varies from year to year, but I should say there are 600 to 700 nurserymen represented in the organization, on the average.

Mr. HAWLEY. Is every State represented?

Mr. PITKIN. I think every State.

Mr. SIMMONS. You don't know what percentage of the entire number of people?

Mr. PITKIN. The term nurserymen is rather a broad one. The man who has an acre of plum trees growing in his back yard, as is frequently the case of men living in the county you know about, he goes into the list as a nurseryman, but he probably spends 10 hours a day working for some larger nurseryman and cultivates a little patch in his back yard at night, or at odd times, and he might be known as a nurseryman. There are hundreds and thousands of them.

Mr. SIMMONS. How many nurserymen do you know are engaged in the importing of nursery stock?

Mr. PITKIN. The importation of nursery stock should be, to be properly considered, divided into two items. First, the raw material of the nurserymen, the seedlings of the fruit trees, and the seedlings for ornamental trees, which are very largely imported from France and planted by the nurseryman in his ground and grown to a merchantable tree. That is a very considerable portion of the nursery stock imported from the foreign countries. There is, beyond that, a merchantable, salable size, which is imported into this country in lesser quantities and in lesser value. The raw material makes up, I think, the larger part of the value of the importation, and while I am on that point, the figures that I have—I got them exact and they agree with Dr. Marlatt, as to the value of these importations, as I am informed—that the year ending June 30, 1910, there was handled at the port of New York alone about $960,000 in value nursery stock, and that value, you must remember, is the foreign valuation, and when you add the freight and the duty and

other expenses you have to add 75 to 100 per cent to establish its value in this country. Possibly the difference in those figures comes from this fact. Certain items of nursery stock are specified in the tariff bill. Certain seedlings are specifically mentioned, and at a certain prescribed rate of duty. Everything else that we import, if there is anything, is bunched under one general term of nursery stock, and it is possible that the lower figures have simply included the general line of nursery stock and have not included the special items which are mentioned in the tariff law—the present laws and in the previous laws. Now, the nurseryman hasn't any quarrel with the fruit people. The prosperity of the orchard man—the fruit grower—is the prosperity of the nurserymen. We do not think we should be held responsible for the bill which is now under consideration, only to this extent, that we have agreed to support certain provisions of it. We did not originate this legislation. In fact, I think, you might say that we "butted in." The bill that was introduced three years ago and which was approved by the Agricultural Committee and passed the House and went to the Senate and was reported favorably by the Senate committee we had no information about until it had reached that stage. We were not consulted, we were not invited, but we "butted in." I am sorry that at that time and since that time the fruit men, the seed men, and the others interested were not invited to a conference with the department, all together to go over these points.

Mr. SIMMONS. Was the failure of the bill you refer to to become a law due to your butting in?

Mr. PITKIN. No, sir; we came down here and we saw Mr. Scott, who was then chairman of this committee, and we had a consultation, I think, in this room, and our committee, with Mr. Marlatt and Dr. Howard, we discussed the situation all the afternoon. The department people admitted that certain provisions in that bill were not practicable, and they didn't have all the information at hand that we were able to give them, and they suggested to Chairman Scott and it was agreed that that bill should be dropped, and we would try and get together before the next session and formulate a bill that would be mutually satisfactory. Is that right, Mr. Marlatt?

Dr. MARLATT. That is essentially correct.

Mr. PITKIN. That was in a formal hearing before this committee. Up in New York State, where I come from, the department of agriculture there has a very good practice of inviting the nurserymen, the fruit growers, and anybody interested to a joint conference be fore they propose any legisilation or issue any rules or regulations for the handling of the business. We have found it has worked very well. I think if there had been an opportunity for such a joint conference that possibly a good deal of friction and misunderstanding might have been avoided.

Mr. RAKER. What percentage of the nurserymen are foreign importers of the United States?

Mr. PITKIN. I was about to answer that question before. There are two classes of importers of nursery stock—the raw and the finished material.

Mr. RAKER. Take the raw material. What percentage of all of those engaged in importing raw material in the United States are foreign importers?

Mr. PITKIN. The raw material, with the exception of apple seedlings, fruit-tree seedlings, pears, plums, cherries, the quince, and also roses, and a large portion of the apples are imported mainly from France, and some from Holland and Germany, and if they do not import that material direct they buy from somebody who does import it; so that practically all the men who are growing fruit trees depend upon France for their supply of that raw material, and they import it either direct or through somebody who does import it.

Mr. RAKER. Haven't you figured up the percentage of those who were foreign importers of this particular produce?

Mr. PITKIN. No, sir; we didn't think it was necessary, because they depend entirely upon that supply.

Mr. RAKER. Hasn't it been figured out that only 10 or 15 per cent are foreign importers of this stock, of the kind you have mentioned?

Mr. PITKIN. I couldn't tell you.

Mr. RAKER. According to your statement, really very few men, then, are engaged in the importing and selling of nursery stock?

Mr. PLUMLEY. What is the reason you buy from France?

Mr. PITKIN. There are a great many nurserymen who for years have tried to grow pear seedlings and cherry seedlings and plum seedlings in this country, and they haven't made a success of it. There is something, apparently, in the soil and climate over there that produces a better article. Apple seedlings are successfully grown in this country—large quantities of them in Kansas. I guess more in Kansas than in any other one State; but, notwithstanding that, there is a large quantity of French apple seedlings imported every year. They cost more money down here than the American seedlings and are believed to be better. That is the reason we pay more.

Mr. PLUMLEY. Isn't there only about 10 or 15 people importing foreign shrubs and plants and seeds?

Mr. PITKIN. Importers?

Mr. PLUMLEY. Yes.

Mr. PITKIN. I had some figures a year ago from several New York importing agents who represented, for instance——

Mr. PLUMLEY. You don't remember the number now?

Mr. PITKIN. From memory, they have 600 or 700 customers each—it ran up into big figures.

Mr. PLUMLEY. Six or seven hundred importers?

Mr. PITKIN. Customers, to whom these importing agents sold. They were salesmen of the French Government.

Mr. PLUMLEY. Isn't it a fact that there are only 10 or 15 people that are importers of this foreign product at the present time?

Mr. PITKIN. It runs up to several hundred, sir.

Mr. RAKER. Now, right back to the tree seedlings; isn't it a fact that the trees you can raise in this country are better than the ones you can raise in a foreign country and import here, but that they can raise them cheaper than they can here?

Mr. PITKIN. If you go to raise trees, it is one question, and when you come to seedlings, it is another.

Mr. RAKER. Let us just take the seedlings.

Mr. PITKIN. I mentioned to you a few minutes ago that we were to-day importing apple seedlings from France that will cost you, laid down here, nearly twice, 75 per cent, anyway, more than we can

buy the seedlings for in Kansas, and we are not paying out that additional money for fun. We are doing it because we believe those French seedlings are better. The pear seedlings and the cherry seedlings and the plum seedlings you can't find in this country.

Mr. RAKER. Isn't it a fact that all of this stock can be grown here in this country with but little more cost than it can be brought here from the foreign country?

Mr. PITKIN. From my experience I should say that was not a question, because it has been tried repeatedly, and we have tried it without success. It has been tried repeatedly by the nurserymen all over the country and they have abandoned it because they couldn't get satisfactory goods. One of our committee, I think, mentioned this morning a case where he knew a man who tried the experiment and got some cherry seedlings, American grown, and planted them side by side with the French, and the American didn't do anything and the French were successful.

Mr. MAGUIRE. You think we need some legislation on this subject, do you not?

Mr. PITKIN. Yes, sir.

Mr. MAGUIRE. What is your suggestion?

Mr. PITKIN. I was going to get to that.

The CHAIRMAN. It seems to me the idea of this matter—there is but one point here—that in view of this tentative agreement you want to be heard on section 8. Section 8 is the crystal of the whole matter.

Mr. PITKIN. I have no desire to take up your time unnecessarily. Before answering your question, I would like your permission to refer to one point that came up this morning and which has come up this afternoon.

The CHAIRMAN. Certainly.

Mr. PITKIN. That is in regard to this matter of the inspection at the point of entry. Now, perhaps our California friends can handle it at the docks in San Francisco—the nursery stock—and handle it safely, but I think the department people will agree with us that that is a pretty difficult proposition to figure out at the port of New York or the North Atlantic ports, for this reason: This raw material, these seedlings, come in during January and February. However, 60 days covers the time during which the bulk of these seedlings are imported. They arrive during extremely cold weather, and it would be a very difficult, if not impossible, proposition to unpack those and inspect them and repack them all in interstate commerce at points all through the country at that time of the year. I don't think there is any question but what the maerial would be very seriously damaged. That point was made in the first bill that was proposed by the department, and which the nurserymen made objection to. I think at the time the department agreed with us that it was not practical, and we started off on another plan.

Mr. PLUMLEY. Why not get at it by quarantining the same as you do against animals, and make them show a clean bill of health before they start?

Mr. PITKIN. There is a provision in the bill under consideration that all shipments must have a foreign certificate of health.

Mr. PLUMLEY. But there is no quarantine against them, really.

Mr. PITKIN. There is in this bill. It provides for a quarantine.

The CHAIRMAN. It is the intention; whether it does or not is another point.

Mr. MILLS. Does not the bill say that we can not quarantine against those things which are not discovered in this country?

The CHAIRMAN. Yes, sir.

Mr. MILLS. In this connection, if we can not have an absolute quarantine, and if we can not have it investigated at the port of entry, is it not possible for the nurserymen to get this stock from those sections of Europe or elsewhere which are not infested with injurious pests?

Mr. PITKIN. That is certainly what we should try to do. We have no appetite or enthusiasm for bringing in infested or diseased stock. We are the first sufferers.

Mr. MILLS. Do you agree that the quarantine might be provided for in this bill against all districts in Europe where stock is grown and is infested with injurious pests?

Mr. PITKIN. There is just one difficulty on that quarantine proposition, as I explained here before on the seedlings—the raw material. Many of us contract for the seedlings 18 months in advance of the shipment, at the time the seed is purchased for planting. They buy the seed in the last of the summer, and it is planted this coming spring, and makes the seedling which is imported next winter. Now, if shortly before the date of the exportation from the other side arrived there was a trouble discovered over there and a quarantine placed against France, it would be absolutely impossible, as the conditions are to-day, for us to buy those seedlings anywhere else in the world that I know of.

Mr. HAWLEY. Wouldn't it make the French growers very careful to see that their nurseries were fully cleansed?

Mr. PITKIN. This agitation during the past two years has resulted very largely in the cleaning up of the French nurseries.

Mr. HAWLEY. Then, if they knew that they couldn't send anything over here unless it was perfectly clean, wouldn't that result in cleaning up entirely?

Mr. PITKIN. Probably it would tend in that direction, but the United States isn't the only market.

Mr. SIMMONS. It is about the only market in which they can sell infested stock?

Mr. PITKIN. I couldn't answer that question. The brown-tail moth trouble appeared in the nursery stock in 1909. So far as I know from the reports of the New York State officials we haven't found a single brown-tail moth on imported seedlings this year. How is it in your State, Mr. Symons?

Mr. SYMONS. No; so far.

Mr. PITKIN. I haven't found any in New York; so you see the agitation has had the result of cleaning up the French nurseries. Dr. Howard went over there in 1910 and he scared them, and that did a lot of good.

Mr. Marlatt this morning, or this afternoon, answered a question that the brown-tail moth that came in on the nursery stock had been found in 22 different States. Is it not true, Mr. Marlatt, that also so far as known the seedlings imported were inspected by the State officials and the seedlings were destroyed before they were planted, and so far as known now there has been no spread of that infestation,

no establishment of that infestation from those seedlings that you mentioned?

Mr. MARLATT. The statement is rather imperfectly quoted. You are referring to some publication of them and not to my statement this morning. The brown-tail moth has been carried practically altogether on seedlings through 22 different States. This nursery stock was followed up by the State and department officials as much as possible. We don't know it was established in these States. But it was 10 years in Massachusetts before they discovered it there. It may be in a State a long time before it is discovered. It is only when it gains headway that it would be discovered. But you are essentially correct in the statement that in the 22 States we do not now know of its establishment in those States.

Mr. PITKIN. I thought the committee might have the impression that it might have been established in those 22 States. I simply didn't want them to get that wrong impression.

Mr. GRUBB. Could the nurserymen have any objections to the same rules as apply in the matter of live stock, the department sending specialists in horticulture to inspect the fruit there before it is shipped here, if this Government paid the expenses of it?

Mr. PITKIN. That might be one way out of it.

Mr. GRUBB. You know every European country quarantines this country against everything, and you couldn't ship a potato to Europe for seed with affidavits that all the judges could make. We can not send a head of live stock to Europe except for grazing, except Great Britain, even though we have no contagious disease in this country, and haven't had any for years. They retaliate in the matter of sheep, and in the importation of sheep, hogs, cattle, and live stock they must be slaughtered 10 days before their entry. I don't see why this Government should not protect our industries, and if this Government is willing to send specialists over there to inspect the fruit trees and shrubs in those countries, then we will have protection, and not without it.

Mr. PITKIN. The nurserymen feel in some States they have pretty fair protection from the present State organizations. I know in our State, after the brown-tail moth was imported three years ago on these seedlings, that the nurseries during the fall and summer were raked over with a fine-toothed comb, to try to find some infestation that had come from these seedlings, so that we feel we are getting pretty well along on that question.

Mr. LEVER. We would like to know why the nurserymen are willing to protect this country against infection that has not been brought into this country and are not willing to protect other sections of this country against infection already here.

Mr. PITKIN. We want to protect the country against anything that is brought in, and ourselves, and I can say, selfishly, that we want to protect ourselves first. That is what the fruit men are doing.

Mr. LEVER. What serious objection could the nurserymen have to the location of inspectors of the United States Government at ports of shipment on the other side of the ocean to see that infected nursery stock is not introduced from these parts into the United States?

Mr. PITKIN. We have had splendid inspection work now supposed to be done by the foreign countries, and certainly it would be a great improvement and a great addition, and we would be glad to see it.

Dr. HOWARD. In consultation with the French authorities in 1910 that same proposition was made to me by the French nursery growers, "If we can not get good inspection by our own inspectors, why don't you send American inspectors over here to do it?" I put that down in my notebook. I then went to see the director of agriculture of France, and he negatived the proposition at once, on the ground that France could not have permanent American officials studying a French industry.

Mr. LEVER. I could very well understand your statement. I am glad you made that statement, Doctor.

How do we manage the live-stock inspection over there?

The CHAIRMAN. Can you answer that, Doctor?

Mr. HAWLEY. Would you be willing to have put in this bill a prohibition on the importation of nursery stock entered in this country infected with any disease, whether prevalent, local, or not?

Mr. PITKIN. I was just going to tell you that. The objection of the nurserymen, briefly, is this: We would be glad to have all the inspection of our nursery stock, both imported and home grown, that we can get. We want it inspected. If there is any trouble, we want to know it. And we want to know it first before anyone else finds it out. And we want to destroy it, and if there is a quarantine proposition we want it to be so arranged that it will not interfere with the supply of the raw material of those seedlings on which we have absolutely to depend for that raw material. There isn't any place else that we can get this material except in France. It hasn't been grown in this country, and from experience I don't believe it will be grown successfully.

Mr. RUBEY. You do not want them if they are diseased?

Mr. PITKIN. No, sir.

Now, I think, so far as I can see, the only criticism that has been made on the nurserymen's view of this matter is in relation to the quarantine, sections 8 and 9, and No. 8 refers to foreign quarantine and No. 9 to the home quarantine. There was a suggestion made here this morning, or rather a criticism about a compromise. The nurserymen haven't offered a compromise in the nature of something that they are going to vote for and stand for, but it is simply our suggestion as to what would be a satisfactory law. I appreciate that any compromise of this nature can have no binding force on this committe or on the House, and we were invited to confer and did express our views on the compromise. If you will permit me to take up section 9 first. That applies to the domestic quarantine. The difference simply would be of the printed words "theretofore widely prevalent." Such wording was to limit that to insects and diseases new to the United States. The department feels that it is important, the argument brought out his morning, that it is important to include all insects, whether they were new or old, and the nurserymen are willing to agree to that if you will go a little further and will provide in the bill for a compensation to us in the case of the loss on account of the enforcement of this quarantine. Our reasons are these: We will, to start off with, if the quarantine develops in our nurseries on the seeds and planted trees, we do not ask anybody to pay for them. We lose them. If in consequence of that quarantine we suffer a loss on good, clean, healthy stock simply because we are

not permitted to ship it out, then we feel that we should be compensated for that loss.

The CHAIRMAN. Who is going to compensate you?

Mr. PITKIN. You compensate the cattlemen whose cattle are destroyed; why couldn't you compensate the nurserymen? We haven't done anything criminal because a bug gets into our nurseries without our knowledge; and if this is for the benefit of the public, why should the nurserymen stand for the loss any more than the cattlemen?

On nursery stock—the season for shipping nursery stock in the spring lasts about 40 days in our section, from the middle of March until the latter part of April. If there was a quarantine established around our nurseries and storage warehouse about the middle of March and somebody came around and conditions looked bad, and we were quarantined until after you could find whether there was any infested tree there, and we were not permitted to ship until the shipping season had done, those trees and plants would be left with us and would have to be burned up. That thing might happen.

Mr. GRUBB. This Government pays the stockman for the loss of his live stock that is declared as unfit in what market, in what slaughterhouse? Does any man buy cattle only on the inspection of specialists; and if found diseased, the grower gets paid for the hide and fertilizer in the animal and it goes to the tank? This Government does not pay, so far as my knowledge goes, any farmer or shipper for anything in the way of live stock except what it brings for the hide and fertilizer.

Mr. PITKIN. We haven't got a very valuable hide and fertilizer in our trees. But is it not true that in an epidemic of foot-and-mouth disease, whatever it was, there was a compensation made by the Government for the cattle destroyed?

Mr. GRUBB. Yes; but those were already here. They were not imported.

Mr. PITKIN. I am talking about domestic quarantine, not imported nursery stock.

Mr. GRUBB. All of our domestic cattle that go to the slaughterhouse goes to the slaughterhouse subject to healthfulness in any market in the United States.

Mr. PITKIN. The Government has paid for destroyed cattle, so I am told.

Mr. HAUGEN. I think you have reference to the foot-and-mouth disease epidemic, but the gentleman refers to the cattle contained in the stockyards in Chicago, for instance.

Mr. PITKIN. The State of New York pays for it.

Mr. HAUGEN. That is, the State—it is not the Government.

Mr. PITKIN. It is not the Government.

Mr. LEVER. I remember in the appropriation act last year—I think Mr. Pitkin is right about that proposition. The Government does pay.

Mr. HAUGEN. But the gentleman here said he referred to cattle sold in the stockyards.

Mr. PITKIN. We feel that if this domestic quarantine proposition goes into effect, it is no more than fair that we should be compensated for any loss sustained.

Mr. HAWLEY. If the bill quarantines one State from shipping stock out from that State to another State, if it contains that provision without compensation, you would oppose it, would you?

Mr. PITKIN. We certainly wouldn't feel that we were getting a fair deal.

Mr. HAWLEY. What would you and the interests you represent do if we should, in the reported bill, provide that a quarantine should be established against any foreign country that had diseases in those plants or fruits or vegetables, or nursery stock, that nothing should be shipped out until it was shown to be healthy?

Mr. PITKIN. Foreign, you means?

Mr. HAWLEY. Yes, sir.

Mr. PITKIN. I was just going to state my view on that. The section, No. 8, on foreign quarantine; the question there is whether it should apply only on new insects and diseases or to new and old, and we would make this objection, that the wording apply to all insects, as is printed, with the proviso that the raw material that I have just explained be exempt from the quarantine provisions of this act. Then there would come up the provisions for permits and notification and inspection by the State officials, and that has worked very satisfactorily. I think it is admitted that these seedlings, this raw material, is easily examined and inspected, and, in fact, in addition to the inspection of the officials, the nurserymen handle every one of those, trimming them up and getting them ready for planting.

Mr. HAWLEY. Your unskilled employees would't recognize a disease if they saw it.

Mr. PITKIN. But they will recognize the brown-tail moth for you.

Mr. HAWLEY. But in this white-pine rust and the San Jose scale——

Mr. PITKIN. We are glad to shut out the white-pine rust—shut that out absolutely. We have no objections to that.

Mr. SIMMONS. Wouldn't there be this danger of bringing in insects and pests in these seedlings?

Mr. PITKIN. I don't think there will be a great deal of danger.

Mr. SIMMONS. Assuming there was an infected nursery over there, then these insects and pests would get on the seedlings?

Mr. PITKIN. The brown-tail moth would.

Mr. SIMMONS. I mean any insect would—the San Jose scale, for instance.

Mr. PITKIN. That wasn't brought in on the seedlings.

Mr. MARLATT. It was brought in on some stock that was brought in from north China; evidently some young stock imported.

Mr. PITKIN. Not on fruit-tree seedlings.

Mr. RAKER. Could there be any distinction between these insects coming on seedlings or any other plant? Suppose it was a year and a half old, wouldn't it come just the same?

Mr. PITKIN. The seedlings only stand in the nursery a year.

Mr. RAKER. Isn't it a fact that the insect will go on the young stock more than they will on the old stock? Isn't that the history?

Mr. PITKIN. That isn't the experience of the nurseries.

Mr. HAWLEY. Why not have an unqualified quarantine against every infected district until they cleaned themselves out of this infection?

Mr. PITKIN. Simply because we believe the seedlings—the raw material—can be safeguarded by inspection. We don't want to be up against the danger of a quick quarantine which will shut us off from our supply at a time when it is impossible to place those orders elsewhere. It would mean that we couldn't plant anything next spring, if a quarantine was put in against France, because we couldn't buy it anywhere else in the world. What would be the effect of that to the orchard man who wants to put in apples and pears and plums?

Mr. SIMMONS. Don't you think it would be a great deal better for the orchardist not to have it at all, if he is going to get it diseased?

Mr. PITKIN. Certainly; but our objection is that the proposition can be controlled by inspection.

Mr. HAUGEN. There is no quarantine unless the seedlings are diseased, so that we do not want them.

Mr. PITKIN. Sometimes people make mistakes.

Mr. LEVER. What would be your system, that the department would have the right at the port of entry to open up these packages and see that the seedlings were not infected, or what?

Mr. PITKIN. We would provide for the inspection of those seedlings at the point of destination by the State official, where they have an organization, and if there were any States which had no organization, then provide for inspection at the port of entry, or any other place that the department desires. As a matter of fact, a very large percentage of the seedlings are imported into States in which there is a State inspection department.

Mr. HAWLEY. In the last analysis, isn't there safety against a continual spread of the present pest in the introduction of a bill which would give notice to the world that they can't do business here unless they clean up?

Mr. PITKIN. This bill provides, in the first place, for a certificate of the foreign country showing that they have been inspected over there, and are clean.

Mr. HAWLEY. If they come from infested districts, we know what has been reported to us here, that sometimes where they have been inspected over there, and thought they were clean, if you just look in the hearings of last year, they found in Maryland in a nursery some instances of either brown tail or gypsy moth.

Mr. PITKIN. I think so.

Mr. HAWLEY. Ought we to run that risk? If all the world knows that unless they have clean districts to ship from they can't ship here, won't they go through their nurseries, by such regulations and laws as they will provide, to see that they are clean? Why should we run in our great industries in America, amounting to $1,000,000 or more, the risk for the benefit of the foreign people who won't clean up?

Mr. PITKIN. Let me cite you an example. In the winter of 1909—while we had been importing these French seedlings for a great many years, most of the time without inspection, they had been closely inspected for 10 or 15 years—in 1909 these seedlings came over and there was found to be some brown-tail moths. Perhaps, from your point of view, when that was discovered in the first place coming over, then the department would have been justified in finding that that district in France was unclean and unhealthy, and immediately stop all importation. The effect would have been this,

that we wouldn't have had any seedlings for the next spring planting, but as the law stood those seedlings came over and were inspected, and in New York State I think there were 700 boxes in which there were found one or more seedlings infected. Those boxes contained on an average 10,000 of those seedlings, and they found in the 700 boxes one or more seedlings that had brown-tail moth on. I think the average was less than 10 to a box. There was 700 times 10,000 seedlings, 7,000,000, and probably less than 7,000 out of that 7,000,000 that had any infestation whatever, and those were all burned up and no trouble resulted.

Now, if you take the position——

Mr. HAWLEY. How many did you say there were to a box?

Mr. PITKIN. About 10,000.

Mr. HAWLEY. About how many infested seedlings to a box?

Mr. PITKIN. Less than an average of 10 in the 700 boxes. There were a lot of other boxes in addition to that 700, and it ran up into the thousands, that they didn't find anything in. Now, under your proposition, France was unclean and unhealthy at that time.

Mr. RAKER. Wasn't there enough defective trees to absolutely destroy this country if they were set out and permitted to continue?

Mr. PITKIN. Dr. Howard could tell that better than I could.

Dr. HOWARD. It would start a great many colonies of the pest.

Mr. MILLS. The department says there were 50 moths on some of those, upon others several million, enough to distribute all over this country, and the fact is that the damage has gone to certain districts in the country. The question, Mr. Pitkin, which has been asked, and which seems, if you would realize the answer, or give the answer the Congressman wants, would settle the matter. Is it not possible by a strict quarantine against these foreign lands to compel them absolutely to clean up and then give you clean stock?

Mr. PITKIN. It certainly would help. Whether it would compel them absolutely remains to be seen.

Mr. MILLS. Would they not?

Mr. PITKIN. I don't know whether they would or not. It would help, as I said. The agitation already in the last three years has accomplished a whole lot, and we are not getting any brown-tail moth this winter.

Mr. HAWLEY. My statement is based on the statement by Dr. Howard a year or two ago before the committee as a result of his visit over there. He said bushes and hedges around the nurseries were infested with various pests.

Mr. PITKIN. I remember that.

Mr. HAWLEY. If we had an absolute quarantine that they must sell clean stock and have clean districts, they would remove those hedges and burn up those bushes, and they would do a number of things that would relieve us of this continual menace. It may be that you found 7,000 that were infested. It might be that 5,000,000 this coming year would get out through the West and get into the forests of the West, so that you never could stop them in the world. It seems to me that it is too great a risk to run.

Mr. PITKIN. It isn't our view of it. Of course, it may be the view of the committee. We are only giving you our view of it. We do not pretend to be authorities. We are not experts; we are giving

you our opinion, and that is our belief; we believe the situation, so far as the raw material is concerned, can be controlled by inspection, and if possible we want to avoid the risk of an unnecessary quarantine which will shut us off from that supply of raw material.

Mr. RAKER. When does the shipment commence?

Mr. PITKIN. We usually get the first shipments about the 1st of January.

Mr. HAWLEY. The 1st of December?

Mr. PITKIN. From the middle of December and on.

Mr. RAKER. How long do they last; from January to what time?

Mr. PITKIN. In our own case our shipments are on now.

Mr. RAKER. Then, for this year, practically all of the seedlings are in? If this bill was enacted, prohibiting them from coming in within the next month, it would give notice to French people and all importers that at their next importation, in January, 1913, they must be clean or they couldn't come in. Wouldn't that give them all plenty of opportunity?

Mr. PITKIN. Suppose they do not?

Mr. RAKER. Shut them out.

Mr. PITKIN. Is it necessary to shut them out in the example I mentioned here?

Mr. RAKER. With the great interests at stake, it seems to me that the country ought to wake up and protect the tree horticulturist and viticulturist with the many millions of dollars interested.

Mr. MILLS. In California we determined that our growers should grow clean stock, and we passed quarantine laws in the State and in the several counties, and one of our biggest nurserymen, who had grown 1,000,000 citrus stock ready for shipment, declared that he would fight the law to the last degree. He did go ahead, but to this effect: He cleaned every one of his 1,000,000 trees, and not one single tree left his nursery that was not healthy. He even scrubbed them with cyanide and then submitted them to investigation at point of shipment and at point of destination. We have thus been able in the largest nurseries in the West to compel the grower to produce a clean stock that we who are planting the trees as a commercial proposition may have a clean bill of health to start with; and it can be done.

Mr. PITKIN. It is done in New York State and many of those.

Mr. HAWLEY. Why not go across the water to do it?

Mr. PITKIN. For this reason: In New York State, under the law there, the Federal law can compel me to clean up our nurseries if we are infested before we can ship anything out of the State or into the State. The State law would take care of shipments in the State.

Mr. HAWLEY. You say, You clean up or we won't do business with you.

Mr. PITKIN. This is not the only market in the world.

Mr. HAWLEY. Let them sell elsewhere.

Mr. PLUMLEY. It would be the commercial interest mostly.

Mr. PITKIN. I will admit that. Our position is simply that we believe that the seedlings, the raw material, can be taken care of by inspection, and it would avoid the risk that we don't want to be put to of having that supply shut out from us, as might be the case, unnecessarily.

We agree to the bill if the raw material is exempt from the provisions, and the inspection of that material could be done by the State, where they have organizations; and where they have no organizations, then, to be done at the port of entry, or in any other way the department may think best. Domestic quarantine, to agree to the wording of the bill, with the understanding that the nurseryman is to be compensated for any loss that may be caused by quarantine, leaving out the valuation of any infested or diseased trees; if they are infested or diseased we will stand the loss, and if they are healthy we do not want to.

The CHAIRMAN. That is entirely a new proposition that this committee isn't informed of. You ought to have talked over that proposition. You have got two amendments here that you seem to agree to, but you haven't got anything there about compensation; certainly it is a new question.

Mr. SIMMONS. I understand you agree to this bill as amended in the typewritten copy?

Mr. PITKIN. No; as to the printed words.

Mr. SIMMONS. I mean to say, will you agree to the bill as it stands in the typewritten amended copy which Mr. Marlatt submitted this morning?

Mr. PITKIN. That is what we agreed to do.

Mr. SIMMONS. I mean these typewritten interlineations.

Mr. PITKIN. Yes, sir; that is——

Mr. SIMMONS. If Mr. Pitkin will agree to that, in view of that proposition to take the original wording of the bill, as printed in the original bill, with these changes which he now proposes, I would like to ask one further question. How are we going to get inspection where they do not have inspection? Do you know how the inspection is going to be done? How is the rest of the country going to be safeguarded in those States?

Mr. PITKIN. I think in the States where they have no efficient inspection that they can be inspected at the port of entry.

Mr. MAGUIRE. Then, if you are going to have a partial inspection, why not have whole inspection?

Mr. PITKIN. For this reason: I think you would find in the States where there is no inspection organization at the present time there is a limited quantity of these seedlings imported, very limited.

Mr. MAGUIRE. Isn't it true that most of the States don't have a very complete inspection law on stock importation of this kind?

Mr. PITKIN. They have, not only on their imported stock, but on their domestic-grown stock.

Mr. MAGUIRE. It is not very effective in most of the States.

Mr. PITKIN. I think the inspection is quite effective in the States where the nursery interests are the largest and where the bulk of this stock is imported. So far as I know, where there is a considerable body of nurserymen they have been the ones that have been behind the inspection laws, and I know that is the case in New York, in Ohio, and Pennsylvania. They have helped secure an appropriation and have backed up the inspection department just as far as it was possible to do.

Mr. MAGUIRE. Don't you think it would be an advantage to the nurserymen themselves to have a complete quarantine law and a

sufficient inspection law, so that it would do away with the necessity of their own inspection?

Mr. PITKIN. In New York the inspection is done by the State department. We rely on it, and supplement the work by our own specialists.

Mr. MAGUIRE. The nurserymen who are carrying a quarantined stock necessarily have to go to considerable expense to inspect that stock themselves.

Mr. PITKIN. Not in New York State.

Mr. MAGUIRE. I speak of all over the country.

Mr. PITKIN. I don't think there is much expense attached to it where they grow any considerable amount of nursery stock.

Mr. MAGUIRE. If they would guarantee that inspection under the nursery law they wouldn't have to look after it themselves.

Mr. PITKIN. Not only for imported stock but for domestic stock.

Mr. SIMMONS. Don't you think your exception of raw material is exceedingly broad, and would not be feasible, because of the words "raw material" in imported goods would extend not only to apples and fruit and seed, but also to a great deal or ornamental stock?

Mr. PITKIN. I think you and I know what it means, what is meant by raw material, but it wouldn't be difficult to get a word that would cover that fully.

Mr. SIMMONS. You have referred there to fruit seeds.

Mr. PITKIN. Yes, sir; those that are planted by the nurserymen. That wouldn't admit them to the department store or the individuals, which has been stated to be the greatest source of danger.

Mr. RAKER. Having a strict quarantine bill, inspection and fumigation would add to the cost of stock admitted to the United States, would it not?

Mr. PITKIN. Inspection on the other side?

Mr. RAKER. Any place; both over there and here, it would add some, would it not?

Mr. PITKIN. I should think—if that inspection treatment is done by the State over there, by the Government——

Mr. RAKER. No; but suppose it had to pass the inspection of the Government, it would add something.

Mr. PITKIN. It has all got to be paid somewhere.

Mr. RAKER. Now, necessarily, inspection and fumigation of stock sent out from one State to another would add something to the cost?

Mr. PITKIN. Yes, sir.

Mr. RAKER. Isn't the main objection that the nursery people have to the strict quarantine, and the strict fumigation and regulation, is that it will affect the volume of their business and not the general interests, so far as preventing these scales and bugs being scattered over the country? I am putting it right up dead square on the matter.

Mr. PITKIN. That is a square question and it needs a square answer and a frank one. I can say to you absolutely and truthfully that in all the discussion among the nurserymen and the nurserymen's committee the item of cost has never been brought up or discussed.

Mr. RAKER. Then what can be your objection to such regulation, inspection, and fumigation?

Mr. PITKIN. As I explained before, as we look at this quarantine proposition, if the law had been enforced in 1909, from your point of view, it would have been proper for the department to say that France was unclean and unhealthy and immediately place a quarantine against French seedlings. Experience has proven that this is a situation that can be taken care of by inspection. We have found that it can be taken care of by inspection. We do not want to run up against the risk of quarantine. No man's judgment, whether he is a department official or a nurseryman or a fruit grower—no man's judgment is infallible. They make mistakes. We don't want to run the risk of that.

Mr. HAWLEY. An inspector might make a mistake and let the bugs out into the country?

Mr. PITKIN. Certainly; there is a human element there. But it has worked all right so far.

Mr. SANDERSON. If we agree on a bill with the typewritten amendments, then would it not provide that you would have to be subject to a quarantine of any new insect that would come into the country? If we had an insect just like the brown-tail moth, would you not then be objecting to just the condition that you have been describing?

Mr. PITKIN. Yes, sir.

Mr. SIMMONS. You practically by agreeing to that amendment have agreed that you would accept a quarantine, but you wouldn't agree to it on the brown-tail moth.

Mr. PITKIN. That is a sort of meet-you-half-and-half proposition.

Mr. SIMMONS. You would have to accept a quarantine for any new insect?

Mr. PITKIN. Yes, sir; we are taking a chance on that.

Mr. MILLS. I would like to ask Dr. Howard a question. In your judgment, would a quarantine declared against France and Germany and other shipping countries shipping stock to our importing nurserymen induce them to clean up their nurseries?

Dr. HOWARD. I am very sure, Mr. Chairman and Mr. Mills, that they would do so from the following experience: I visited this region, where they are growing these seedlings, in France, in 1909, and I found the hedges and the forests around, as has been said, infected with the brown-tail moth. They had had advance notice of my coming—advance notice had been sent to the French nurserymen—and they were on the lookout for me. A circular letter was sent out that "the inspector general of the United States was coming," and therefore to clean up and make the situation agreeable. I found the brown-tail moth abundant, as described. I went to the French ministry of agriculture and got them to propose a regulation for the inspection by French experts. They passed that, and the next year when I visited the nurseries they were in a most admirable condition. The very fact of my visit the last year had put them on guard. The result was that in that entire district in 1910 I found not a single brown-tail moth—not a single gypsy moth—and it was in a large part due to the scare that they had had from my visit in 1909.

Here is another point: The French Government established an inspection service, anticipating the passage of this bill last year, which provides for an inspection certificate. They passed this regulation, and the nurserymen generally had their nurseries inspected. Find-

ing out, however, during the last season that the American bill did not pass last Congress, many of them refused to pay for the Government inspection and have been sending their goods over without inspection certificates. I want to say further that I learned to-day that the English Government is just establishing an inspection service in anticipation of the passage of this bill.

Mr. LEVER. What will be the cost to the Government to put in a strict quarantine against infested importing nurseries, with the idea of making a thorough inspection either at the port of entry or the port of their destination? What is your estimate?

Dr. HOWARD. I haven't made an estimate.

Mr. LEVER. The statement was made on the floor of the House, I think I made it myself, of the very proposition that it would take an army of men and a world of money. I want to know whether that was true or not.

Dr. HOWARD. I recall the statement, but when we had the bill before us in the other form we estimated that it would carry $25,000 a year with the assistance of the State officials.

Mr. RAKER. Carrying out your views derived from your visit to France, is it your opinion that the French Government would look with considerable favor upon such legislation as this by the United States?

Dr. HOWARD. I think they would. I am sure.

Mr. PITKIN. I may answer Prof. Sanderson's last question as to what we may expect from the foreign quarantine if there were new insects discovered. That wording, I think, came about in this way: In our discussions this proposition was advanced: That it was not the intention of the department to quarantine this raw material on account of the San Jose scale, the brown-tail moth, and the gypsy moth, which were already in this country, and the conditions over there didn't warrant, and we said "All right; cover that in the bill; and if you do not intend to do it, let us exempt those." So that bill was worded that way without a definite idea of excluding those three troubles. That is the way that wording came about.

The CHAIRMAN. Dr. Howard, I believe from what you said that if this bill were passed it would put France and England on inquiry and notice.

Dr. HOWARD. My opinion is that if a certificate is required the work will be done carefully and conscientiously in those countries.

Mr. GRUBB. Some of the owners of the most prominent herds of cattle in Great Britain refused to permit the American inspectors to inspect their herds. But they never sold another animal here, and they sold to the Argentine Republic, and they were destroyed at Buenos Aires. If found diseased they cleaned up their herds by the tubercular test and now ask the American buyer to go and buy their cattle. They have absolutely quarantined themselves by not complying with the inspection laws of this Government; and can not the nurserymen do the same over there?

Mr. PITKIN. We should hope so.

Mr. RAKER. Before you conclude, Mr. Chairman, I should just like to give one word in regard to the San Jose codling moth; those that have been destroying the pears and apples in California. Some 25 years ago it was my pleasure to be in San Jose about three years,

going to school, and I observed the wonderful destruction that was being had at that place. You go back in the interior and in some of these counties they have none of these diseases at all. You could pick off an apple or a pear for miles and miles of territory where the fruit was without one worm in it. Absolutely none could be found. Within four or five years, by virtue of the distribution of pests in the fruits, they destroyed the production in that valley, and you could go on for 50 miles farther and find none. That has been the condition existing in California, until we have to-day a strict quarantine law against counties, and not only has the State made an appropriation, but each county has a county inspector, paid a salary, with full power of quarantining and full power of fumigating the various stuff that comes in and is bought for plants and seedlings and fruits and such things like that. I just call your attention to that. In parts of our State to-day that are valuable, like the Globe River Valley, for apples or pears, you can take a box or a half a box of that fruit and you will not find one worm in it, because they haven't got to that territory yet. It is just simply an illustration of what it would be by virtue of permitting those insects only discovered in one part or section to migrate by virtue of being shipped into other parts. It is vital and of as much importance as the preventing of the importation of these insects from the foreign countries. I want especially to call this committee's attention before they finally frame the bill and permit it to go on the floor of the House, that you give your best judgment and your best consideration to the condition of interstate shipments, so that those that are infected by these deadly scales and moths and insects might be prohibited from shipping infected stock into other sections.

I hope in behalf of California and the West upon this question, and in return also can say for the East, that you will be able to keep out those pests that we already have in the West, and I do feel that no interest, the nurserymen or otherwise—and I asked Mr. Pitkin fairly and squarely upon the proposition as to what was the objection, what was the purport of this amendment that he spoke of, whether or not the importations for this year had not already been in, and that the new importations for next year would not come until some time in January, 1913, and last about three months, and he said yes. Now, why can it not be that those people who import will be absolutely protected, as well as these who send their stock here, as well as from State to State? You are not cutting down any project, you are not depriving any people of anything they need for the necessities of life. You might stop for a few months a little of the importation or of the shipment of these plants and bulbs and trees from one State to another, but it will be a godsend to this country if it is done. When you have seen what we have seen in California, trees that it has taken 10 or 15 or 20 years to grow, destroyed by the acre, destroyed along the walks by the mile, simply because there was no care and attention given to these matters, enough has not been said, enough could not be said to this committee as to the value of these products to the country.

Mr. SIMMONS. If these amendments that have been proposed here by Mr. Pitkin of the nurserymen were put into this bill, do you think it would be as effective as the interest would demand?

Mr. RAKER. Absolutely no. I feel as though I had been recreant in the interests of the West and in the interests of California. I would feel that their interests had been absolutely unprotected. In a matter of such vital importance it would seem that these great interests had been practically stricken down because of the enactment of a law permitting other parts of the State to go on as by a license, and to say, You may continue just as long as you desire on the discovered pests, but the new ones we will look after. The discovered ones have destroyed billions of dollars' worth of property around the country, but it is all right, gentlemen. Any new thing that comes along we will protect you. My dear sir, they will be finding the same old name for the new object, and instead of trying to give it a new name, as we are trying to do to-day, because the law would say, If it is new it is a different matter, but if it is old it is all right. So that they will just reverse the plan of giving new names and finding new names, and I want to tell you that you have a dangerour piece of legislation if it goes through that way. I am not saying anything against anyone. I wouldn't for anything on earth. It isn't my purpose, but this committee has recognized us and given us an opportunity to call attention to these matters. Why, the things that are coming from the Old World might do us but little injury as compared to those already here and will be shipped from New York and other Eastern States west. I just simply want to call your attention, Mr. Chairman—can there be any possible reason, can there be any excuse for not preventing the destruction of the western horticulturist and agriculturist and the forests in the West by virtue of the old diseases any more than by the new?

I want to thank you, and I want to thank the rest of the committee, because it appears to me that you are interested in this matter, and I want to say to you that the great interests of California—the farmers, the horticulturists, the agriculturist—knowing and realizing the splendid ability of this committee and its membership, knowing their services in this matter, of the old as well as the new members, are looking to you with a good deal of earnestness and a good deal of desire and hope that the legislation will be enacted.

Mr. PITKIN. I want to thank you in behalf of the nurserymen for the opportunity of being heard, and they express the hope and belief that in your wisdom you will be able to formulate a bill that will afford the right measure of protection, and at the same time will not injure a legitimate business in the country.

Mr. GRUBB. And may I thank you also for your interest in the potato?

Whereupon the committee adjourned, subject to the call of the chairman.

AGRICULTURAL EXTENSION DEPARTMENTS

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, February 29, 1912.

The committee met at 10 a. m., Hon. John Lamb (chairman) presiding.

There were present before the committee: Hon. Hoke Smith, United States Senator from Georgia; Dr. W. O. Thompson, president Ohio State University; Dr. K. L. Butterfield, president Massachusetts Agricultural College; Dr. Andrew M. Soule, president Georgia State College of Agriculture; Mr. B. F. Harris, representing the Bankers' Association of Illinois; Mr. Joseph Chapman, jr., chairman of the committee on agricultural development; Mr. Howard H. Gross, president National Soil Fertility League of Chicago; Howard Edwards, president Rhode Island State College.

Mr. LEVER. Mr. Chairman and gentlemen of the committee, we have here this morning gentlemen reperesenting the agricultural colleges and experiment stations, also representatives of the banking and commercial interests of the country who are interested in H. R. 18160. A similar bill is now pending in the Senate, known as the Smith bill. Dr. Thompson, president of the State Agricultural College of Ohio, will be in charge of the hearing for those interested in the bill and will introduce the speakers.

Dr. THOMPSON. I am here as the chairman of the executive committee of the Association of the American Agricultural Colleges and Experiment Stations. The association had its meeting last November and went on record on the question of expressing a preference for a bill in the aid of agriculture that should have in it the extension feature. This is not a new proposition. It has been before Congress now for some 2 or 3 years.

Inasmuch as there are several gentlemen who will desire to return to their homes, I think it best for me not to speak upon this bill until later, so that those who desire to return can be heard now. President Butterfield, of the Massachusetts Agricultural College and also of the Country Life Commission, who has been actively interested in agricultural college work, is here, and I suppose we would like to have him heard first. If there are any others who must be heard early in order to get away we will give them that opportunity. So far as I am concerned, I want to celebrate the Fourth of July at home, but I shall stay as long as your patience will permit, and so it is not necessary to hear me this morning. We shall be glad to hear from President Butterfield.

STATEMENT OF DR. K. L. BUTTERFIELD, PRESIDENT MASSACHUSETTS AGRICULTURAL COLLEGE.

Dr. BUTTERFIELD. Mr. Chairman and gentlemen of the committee, my interest in the general question of extension work has been of considerable standing, growing first out of farmers' institute work in the State of Michigan. I soon made up my mind that the work of reaching the farmer at his home must be the big thing in agricultural education, including in the farmer, of course, the young farmer, the boys or lads in school. Six or seven years ago when our Association of Agricultural Colleges and Experiment Stations, which includes all of our agricultural colleges, organized a standing committee on extension work, I was made chairman of that committee, and every year for six years the representatives of our association have met to discuss these questions. We soon came to the conclusion that while extension work designed to reach the farmers through demonstrations and through printed literature was a good thing, and that while this matter was likely to be taken up by the States to some extent, if we were to get the largest results there must be a movement that was distinctly national. And as we met from year to year and heard the returns from our agricultural college representatives from the different States, there seemed to loom up this one big question that our association could take up.

Furthermore, when our Commission on Country Life was making the rounds of the country and holding hearings, we took pains to ask at the different hearings of the farmers assembled there, "What, in your judgment, is the one most important thing the people of your State need?" Now, whether our hearing was in the South—and I may say practically all over the South this was true—whether in the South, in the West or Middle West, or in the New England States, the general idea of a form of education which should carry out to the people at their homes the results of the experiments of the experiment stations and the work of the United States Department of Agriculture, seemed to be the one big thing. I recall some of our hearings in the South where, without our having mentioned the fact of extension work, and where perhaps it was not known, nevertheless the idea was brought out more than once, and that by the farmers themselves. "The thing we need is to know more of what the colleges and experiment stations have gathered up in those centers." And while a great deal has been done and is being done to-day by the different States to disseminate this information, and the Department of Agriculture is doing a great deal to disseminate this information, when you realize that the idea of the extension service is to reach every man on the land, then the problem takes on its full significance.

This work of extending the teachings of agricultural colleges and experiment stations to the great masses of farmers has appealed to me as a national question, calling for aid from the National Treasury for several reasons. We have heard a good deal about conservation, and while we may have different attitudes toward it as a political matter, I think that everybody concedes that there is a serious question before us with respect to the conservation of our soil resources. I am not an expert on soil management, but I do know that the general feeling among the experts and among the farmers is that this is a serious question, a national issue. We have this great heritage of

rich land, and we must make the best possible use of it. This is not a local question. It is a serious question and a national question. We may pass laws in regard to conservation of water powers and other natural resources, but I don't know of any workable law compelling a man to conserve the fertility of his farm.

Absolutely the only way that we can expect or hope to conserve the soil fertility of this country is to conserve the intelligence of the great masses of people who till the soil. That means that every man must be reached. These people attend farmers' institutes, they take agricultural papers, and we have found during the past few years that the most successful method is in showing the farmers the value of new processes, processes in which they have no faith themselves to test. It seems to me that this is the real argument for Federal aid, that the only way by which we can conserve our soil resources is to educate the people on the land. The ideal is to reach every one of them. Perhaps we can not reach that ideal, but we can at least try. There is another argument that appeals to me. We have heard a great deal of discussion, some wise and some otherwise, during the past few years with respect to the danger of a shortage in our food supply. And the high cost of living, no matter what other fundamental reasons may be, has something to do with or is affected by the food supply, and as our cities grow, naturally that question is coming to be a national question. Now, there may be legislation that will help out that point. I hope that something may be worked out in the next decade that will make the cost of distribution of farm products less than it is. But I still believe that fundamentally the same processes are going to be effective in making this food supply adequate as are effective in making the conservation of soil fertility effective, namely, education. Our land is not farmed by corporations, it is not farmed by syndicates, it is farmed by millions of small farmers, and each one of those men must be affected by the new knowledge, they must be given a grip on the new methods.

It is sometimes suggested that the States will look after this, that they are doing more or less of it now. Some of the States will do it and do it adequately, but I can not help going back to the time when our agricultural colleges were started under Federal impetus and aid. I happen to be a graduate of an agricultural college which was opened for students in 1857, and I know that in Massachusetts there had been agitation for an agricultural college away back in the forties. In fact, there were two or three other States—Pennsylvania and Maryland opened colleges earlier, before the passage of the Morrill Act—but the passage of the Federal act was the one thing that created a system of agricultural colleges that probably has no equal in the world.

After these agricultural colleges were established, many of them began research work, experimentation work, and when the Hatch Act of 1887 was passed there were some 16 or 17 of these agricultural colleges in different States actually doing experiment work. But the moment the Hatch Act was passed and Federal aid given, the whole idea of experimentation was raised to the dignity of a great national question, and just that moment the system of experimentation, through experiment stations—which also is probably unequaled in the world—came into being. It may be said that times are different now, but I believe that much the same principle prevails to-day.

Some of our large States are doing extension work now. Some of the small States have an appropriation from the legislature, but they can not throw themselves into the work of reaching every farmer, because the legislature does not support them adequately. Nevertheless, when a Federal grant is made, conditioned upon State support, I think the State support is apt to be forthcoming. So I think you would find, if this bill that is under consideration were passed and made a law, that immediately we would have a great system of public education in agriculture in this country. And we haven't it now.

Under this plan it would be organized and stimulated, and would evolve into a great system. And I can't think of anything more significant in the line of education than a great nationalized movement on behalf of the tillers of the soil. I am trying to avoid rhetoric, but a great nationalized movement on behalf of the tillers of the soil, designed to give them a stronger grip on the knowledge that we now have, an easier way in which this knowledge may flow out and be absorbed by them and used by them, not only means a great system of education for the benefit of the people who till the land, but necessarily, because of the dependence of the people in the cities upon the land, the ability to supply this food depends upon the fertility of the soil, and such a movement is not merely a farmers' movement, but one full of significance for every man, woman, and child in America. In this country we have done much for education. The States have done splendid things, the Federal Government has done splendid things, but I say emphatically that I can not conceive of any movement in the educational field to-day that could be fostered by the Federal Government that would have larger values or a greater influence in developing the intelligence of our farming classes to make better farmers and better citizens than this measure that we are advocating.

I am quite aware—at least I understand from what is published in the papers—that there is a feeling in this Congress that we ought to be economical; that the Federal Government is spending a lot of money. I do not know whether this argument will impress the Members of Congress or the gentlemen of the committee, but it seems to me that this expenditure, which is not very large, and not at all large compared with the interests at stake, should be regarded absolutely as an investment; and I am frank to say that if it can not be regarded as an investment, if we expected the agricultural colleges would misuse it or use it in such a way that it would not be an investment, the bill ought not to be passed, but I think it would be mistaken economy not to give a chance for this education, for the agricultural colleges and the Department of Agriculture to get out among the people who need it most. The educated farmers don't need it; the one man in a hundred doesn't need this bill.

The man who comes up to our agricultural colleges, attends farmers' institutes, and takes agricultural papers doesn't need it, but the only way to reach the ninety-nine is to go out where they are, asbolutely. And I think that the only proper way to look upon this is to look upon it as an investment of the people's money in an enterprise that promises to return manyfold, not directly to the Federal Treasury, but to the prosperity of the farmers and also to the economic welfare of the country as a whole. Now, so far as I have been able to

learn, the farmers who are aware that this measure is pending, or that a measure like this has been brought up, are heartily in favor of it. I have had occasion in several States while on the Commission on Country Life to sound the public opinion of the farmers, and I recall that the National Grange two years ago heartily indorsed the idea. I had a letter a year and a half ago from Mr. Barrett, president of the Farmers' Union, which is very strong in the South and far West, in which the Farmers' Union gave a strong indorsement to the bill. The Farmers' National Congress also indorsed this general proposition about a year and a half or two years ago. Of course, this will not make the question plainer for this committee, but I simply make the point that these great farmers' organizations feel that this particular method of distributing agricultural information is effective, and it justifies at least Federal appropriations. It must be remembered that this is not a gift of money to the States that is simply turned over to them. They must do their part, and, as a stimulant, as a means of nationalizing the movement, it seems to me that it has its great force.

The modern thought in regard to the job of the agriculture college is this. Of course the old idea of the college was to teach students who come to the college. Now, that is still the work of the college, but the agricultural college that is up to its job conceives of its function as that of being of the largest possible service to the agriculture and country life of the State in which it is located. Now, there are three main ways in which that service can be rendered. They are distinct but coordinate, and they must all be utilized or else this service can not be adequately rendered. The first one logically is investigation. Investigation in agriculture is absolutely fundamental to the teaching of agriculture as well as fundamental to the best practice of agriculture, so the agricultural colleges, through their experimental stations, have been building up during these 25 years not merely scientific knowledge for the benefit of the farmer, but they have also used this knowledge to teach the students who come to the college. The second function is to train leaders, men who are farmers and who will go back to the farm, there to become successful farmers and community leaders; and, then, there are some other experts, not necessarily practical farmers, but who take up the work in the Department of Agriculture and other places in the rapidly increasing number of vocations that are opening up to graduates of agricultural courses. Now, the third task of the college, and this is just as fundamental in its job of serving the necessities of the people as the other two, and I sometimes think even more so, is this task of carrying out to the people who can not come to the college the information that is gathered there at the college.

In other words, it is simply, as one of the trustees of our own college has said, making a classroom of the State. No agricultural college is doing its full duty until it has recognized this as a coordinate part of its work. Now, you may say this might be done by the States themselves. Yes; just as agricultural colleges might have been established by the States. Possibly agricultural experimental stations might have been established eventually by the States themselves. A few of them did do it before the Hatch Act was passed. However, the Federal Government has recognized the policy, and it has become

historic now. It has recognized the policy of establishing experiment stations in order that these investigations could be carried on. The States had to spend considerable, and some of them spent a great deal more money than the Federal Government. Now the logic of the whole thing hedges about this third function, which is to distribute the information to the people by demonstration of the methods that experience has proven the most efficient. I believe that this is the most significant of all, because it reaches the men who are doing the business. It goes out and reaches them directly, and everywhere it goes it will give a greater intelligence, a greater grip on the problems, and I know will meet the popular need and the popular approval, not because it gives a subsidy to individuals, but because it gives help to those most in need of it.

I thank you, gentlemen.

STATEMENT OF DR. ANDREW M. SOULE, PRESIDENT OF THE GEORGIA STATE COLLEGE OF AGRICULTURE.

Mr. SOULE. Mr. Chairman and gentlemen of the Committee on Agriculture: I want to discuss with you for about 10 minutes some phases of extension work we are undertaking in Georgia, and some of the results obtained, and see if I can indicate to you why a Federal appropriation for the advancement of the teaching of agriculture in rural communities is desirable and appropriate at this time.

It is not necessary for me to point out to this distinguished body the general fact that agricultural production per acre in the United States is tending to decline rather than increase. I shall direct my remarks particularly to conditions existing in the South and in the State of Georgia, though I think conditions existing there are typified in many other States as well.

About 1859 or 1860 the general use of commercial fertilizers found its way into the South. Last year I presume more than 5,000,000 tons of commercial fertilizer were used in the United States. You may be interested to know that the average increase of lint cotton per acre has not been what we might have expected from the increased use of fertilizers. It has practically stood still for a period of 50 years. This is a serious problem—that the farmers should be burdened with this large increase in the cost of production without materially increasing the yield obtained by the use of commercial fertilizers. The fact of the matter is that lint cotton will presently reach a prohibitive price to the manufacturer or the farmer must learn how to produce more per acre or secure greater yields from the fertilizer he now uses. In the South we feel that commercial fertilizer is necessary to the production of crops, but we realize also that where crop rotation is instituted the return from fertilizing the crop is much greater. For the industrial welfare of the South and for the protection of the export trade of the United States it seems to me that it is necessary for us to devise some scheme of education by which we will reach the southern farmer and increase his ability to raise cotton at a moderate cost. There are many other arguments which might be advanced to show the necessity of agricultural extension teaching, but I will have to omit them at this time.

The next thing I desire to call to your attention is the fact that industry and science have practically developed hand in hand, but

agricultural science has altogether outrun the practice of farming. In other words, our colleges to-day, and the Department of Agriculture of the United States are in possession of thousands of fundamental facts that would increase crop production in this country were they placed within the reach of the farmer in a way which he could understand and apply. "Is this a practical proposition?" I must return for an illustration to the State of Georgia. Last year the yield of cotton in that State increased a million bales over that of the year before. At once you say this was due to weather conditions, or some peculiar condition of the soil, or the increased use of fertilizers. But add all these together, if you please, gentlemen, and compare the production of cotton in Georgia with that obtained in every other southern State, and you still have 25 per cent of the increase unaccounted for. We believe that the work which has been done along extension lines in Georgia had a measurable effect on producing that increase in cotton last year. Why do I say this? Because last year there were held in the State of Georgia something like 278 meetings of farmers. These meetings were attended by nearly 45,000 individual farmers. Special trains were operated in that State which visited 154 towns and reached 350,000 people, or practically one-third of the white population of the State. Of course, there were many colored farmers there as well. At these stops, which lasted from two to three hours, the question of soil fertility was discussed in all its phases.

I saw 2,000 to 3,000 farmers stand for two hours in a pouring rain to secure the data which the agricultural college was trying to bring them in this way. And I can take you down to the State of Georgia and show you farmer after farmer who used the knowledge which the agricultural college brought to them through the medium of the train and raised last year two bales of cotton to the acre where they had not previously raised more than one-half or, at the most, one bale. This type of instructional extension work is practical. This type of work can be carried forward independently by the several States, but the impetus of a Federal appropriation is needed to take this body of information and place it before our farmers in a manner which will revolutionize the agricultural production of this country. It will not be done instantly, of course. Most of us will have passed away before the work is accomplished, even if you gentlemen in your wisdom pass the Lever bill which we seek to have enacted into law, not for a selfish purpose, but that we in these agricultural institutions may do the missionery work essential to the uplift of the farmer and the restoration of the fertility of our farming lands.

I want to say just a word now along another line. We have in Georgia boys' clubs and girls' clubs for the promotion of agricultural knowledge. At this juncture I desire to call your attention to the corn show which we had down at Atlanta last fall, where 750 samples of corn were on exhibition, representing the individual acre of 750 Georgia boys. Some thousand of the boys were in Atlanta, too, and proved the center of attraction in that city of 200,000 people. It was the first time, Mr. Chairman, that I have ever seen the citizens of a great city do homage to the country boy. Why did they do it? Because they realized that those boys had performed a function—a service—for the State of Georgia that had never been accomplished

before. In one district—the seventh congressional district of Georgia—where we received some special financial support from the Congressman representing that district, the 1,200 boys belonging to the clubs last year increased the monetary value of the corn crop in that district more than $50,000. This statement is based on the written reports of the club members, and was certified to in each instance by disinterested parties.

Now, I realize that some gentleman may say, "We do not want to develop a type of instruction which is based purely on money." But that was the least of all the things these boys accomplished. I want to tell you that the boys' clubs of Georgia have made it possible to move the corn belt south in reality. More than 554 boys in Georgia last year raised over 100 bushels of corn per acre. Do you gentlemen realize that the average production of corn for the last 10 years in the State of Georgia has been about 12 bushels per acre? Do you realize that 750 boys produced an average of 84 bushels of corn per acre, or more than six times the average yield of the State of Georgia? How was this accomplished? The boy readily and gladly received information about corn cultivation when he was approached by our extension agent, and did not stop to argue as to whether it was a good thing to use a thousand pounds of fertilizer or not, as is so frequently the case with older men. There was no doubt in his mind but that the college professor knew what he was talking about. He believed the instructions sent him and put them into practice, and the gray-headed grandsires of Georgia who thought for so many years that you could not raise over 10 or 12 bushels of corn per acre have also been converted to the boys' way of thinking. Last year the only Southern State to increase its yield was Georgia. The value of the crop increased by nearly $10,000,000 last year, which was all the more remarkable in view of the fact that one of the worst droughts which ever afflicted that State prevailed in 1911.

Now, there are those who will say, "What has this to do with extension work? It has everything to do with extension work. We want to reach out and bring succor and relief to the man who tills the soil and to put a constructive purpose before those thousands of Georgia, Iowa, Illinois, and Minnesota boys to teach them to become intelligent farmers and to provide an agency for disseminating information, which has been denied up to this time.

We argue much about keeping boys on the farm. Do you think you will ever stop the rush to the city if the boy sees the yield on his father's farm steadily decreasing year after year? Do you think you are going to inspire him with a desire to remain on the farm unless you can show him that farming can be made a profitable industry? After being in educational work nearly 20 years, I do not know of anything that will reach out and take a grip on these boys like this proposition of sending out an expert from the college with the power and the knowledge to reach down to him, to get acquainted with him and his problem and tell him where the trouble is and correct the difficulty which has held him in bondage all these years.

Mr. Chairman, I do not know how much time I have, and I expect I have taken too much already.

The CHAIRMAN. You can take as much time as you like, as long as you make it as interesting as you have been doing.

Mr. SOULE. Now, we have heard a great deal about the farmer who is afraid of the college man, who does not take kindly to his suggestions. To-day there are on my desk dozens of letters from farmers wanting all kinds of information about their farms and their farm problems. Now, I can answer these letters, but can I do it with the degree of skill possible could I go out on that man's farm and go over the situation with him and meet each problem as it comes up? Of course not, and it is to bridge over this chasm that we ask your aid through a Federal appropriation for extension teaching in agriculture. The man who says that the farmer is not in a receptive frame of mind at the present time does not know what he is talking about and is not acquainted with farmers. In fact, the farmer feels he has been neglected and is demanding assistance and advice which the colleges are quite unable to render because of their limited appropriations.

We have a great problem in this country, namely, the conservation of our soil. We have many conservation congresses and talk much about these things, but we are only going to save the soil by educating the farmers. This we propose to do through extension teaching in agriculture, and it will never be accomplished in any other way. In Georgia it is the policy of the State College of Agriculture to make a physical and chemical survey of the soil of every county. Then analyze every kind of soil in that county and establish a demonstration plat, thus obtaining fundamental truths concerning the soil for the information of the farmer.

Do you think we are not going to bring the truth home to our farmers by this method? Certainly we are. Then, we want a trained expert who can take these results and carry them out into every house in that county. Then we will put a business system on the farms. We have no business system on our farms at the present time. There is not an institution in Washington, Chicago, or New York that would not close its doors before the end of the present year if it was operated like the average American farm. Can you blame the farmer? We have condemned him entirely too long. How are we ever to reach out and bring the sorely needed assistance to him? We have no adequate machinery for placing before him the knowledge which we have accumulated in our agricultural colleges and experiment stations, and unless we can take it to the people and give it to them in a form which they can appreciate it is useless. We need an endowment for this work. In the State of Georgia we have 146 counties and we are spending the large sum of $8,000 a year on soil work, and we wouldn't be spending that if it had not been for the work of United States Senator Smith. Eight thousand dollars a year. We can probably examine two or three counties with that amount. But if you gentlemen authorize this Federal endowment for extension work on the condition that the State will put up an equal amount the ability of every agricultural college in the United States to serve the agricultural constituency will be doubled and even quadrupled in some instances. With this endowment it would be possible to reach out in every State along a variety of lines and grapple successfully with some phases of the nation-wide problem. Of course extension demonstration teaching is a national problem. Dr. Butterfield told you that. What else can it be? The welfare of

the United States is bound up in the restoration of our soils. The welfare of the United States is bound up in a constructive agricultural policy for her farmers. To-day we have no proper administrative policy on our farms, and the whole situation must be changed in order to place our agricultural practice on a proper basis. Are you going to leave it to the State of Georgia to work out its salvation? Suppose it does. What will you do with the balance of the States? It will not do much good to build up one State and ignore all the others. This is a national problem and it must be met by Congress. It must be met by a Federal appropriation supplemented by appropriations in the individual States.

The agricultural colleges in the several States constitute the proper organization through which to carry on extension teaching in agriculture. The reasons for this are not hard to appreciate if one has studied the situation with any care. Extension teaching to be successfully carried on calls for a definite knowledge of local conditions, which can naturally only be acquired within the State and largely through the agency of the college. It is not possible for anyone, no matter how well they may be educated, to understand and appreciate the conditions existing in a given locality until they have had a chance to study and assimilate the situation. It is the business of the college to acquire information of this character: therefore, it constitutes the proper agency for its dissemination. The value of the service which the college may render through liberal support for extension teaching is hard to estimate. For instance, in the southern part of Georgia there are soil areas where the content of potash per acre-foot does not exceed 400 pounds. A normal soil contains per acre-foot of this essential element for crop production 8,000 pounds and upward. Many southern farmers have tried to produce cotton on these lands with applications of from 2 to 10 pounds of available potash. The absurdity of this practice, in view of the natural deficiency of the soil in potash, is at once apparent. Farmers pursuing this practice have naturally failed to raise large crops of cotton, the plants have rusted badly and shed a large part of the fruit "set on." As a result, the farmer has produced little, and in that sense is not a good citizen or one calculated to keep the United States in the vanguard of nations. When you teach him, however, that an application of from 100 to 200 pounds of muriate of potash puts his soil in proper relation to the crop, you change him from a destructive to a constructive agency, and have filled his heart with hope and inspiration, for the use of the amount of potash indicated generally results in materially increasing the yield on the soils of the coastal region, which are often notably deficient in potash. The importance of ascertaining information of this kind and placing it before the farmer in an acceptable form can not be emphasized too strongly, and shows how effectively extension teaching properly localized through the agricultural college may be made to serve the needs of a given community and of a State, and through it the Nation as well.

Now, then, one other thought and I am through. The medium of extension teaching—some people say, "Should this be done through the agricultural colleges?" My friends, how will you know anything about the soils of Georgia from Washington roads? Let us

make this a cooperative proposition, for that is the way that we shall obtain the best results in this work. Down in my State, in the southern part of the State, there are men who are trying to grow cotton on land which contains 400 pounds of potash per acre-foot. That doesn't mean much to you, perhaps, but when I tell you that a normal soil should contain 8,000 pounds of potash per acre-foot you get a grasp of the very difficult things those people are trying to do. I can go to the State of Illinois, Minnesota, Iowa, or any other State and show you one illustration after another of the utter absurdity and impossibility of our farming practice. Now, here is a man, we will say, who puts on his land 2 pounds or 4 pounds of potash per acre and rests with that. He produces nothing, of course. He is not a good citizen. He is not of much use to the United States. He is not going to help to keep our country in the vanguard of nations, is he? Of course, he is not going to swell our industry, he is not going to be a good citizen until you teach him the necessities of the soil; but you go out to that man's farm and tell him to use 200 pounds of muriate of potash and you double his crop. You test his land and find out what it requires, and when a man understands the fundamental principles of chemistry he can go out and analyze that soil and correct the deficiency in it.

My proposition is that extension teaching in agriculture is a localized matter. The agricultural college is a localized and at the same time a Federal institution. Extension teaching in agriculture should therefore be a Federal-State undertaking, with a localized base of activity. It must be so. For if our men in the Georgia State Agricultural College do not know more in a general way about the soil of Georgia than any other group of men in the United States, then you should immediately withdraw from the State of Georgia any funds given to it for agricultural education and discontinue the institution, because it is not doing effectively the work for which it was designed. If you pass a measure of this kind in order for it to be efficient in serving the interests of the farmers in each community, it must therefore be localized through one of the agricultural college centers.

I have heard that there is some doubt in the minds of Members of Congress as to whether the farmers favor a measure of this kind. I do not believe the Georgia delegation have any doubt about it, because the State Horticultural Society, the State Agricultural Society, the Live-Stock Breeders' Association, the Georgia Breeders' Association, and the Farmers' Union of Georgia have unqualifiedly indorsed this measure and have asked its support and adoption at the hands of the Georgia delegation. If you have not heard from the State which you happen to represent it is simply because someone has failed to notify you of the attitude of the farmers concerning their interest in and approval of this measure. In conclusion, I do not think that this body of men representing the United States of America are willing to let this session of Congress pass without doing something to put the vital knowledge which is to redirect our agriculture practice within the reach of the people who till the soil, and who are to determine the position and status of this Nation before the civilized nations of the world.

By request of Dr. Soule the following telegram and report are appended as part of his remarks:

UNION CITY, GA., *February 26, 1912.*

Dr. A. M. SOULE,
Washington, D. C.
(Care Hon. Hoke Smith.)

Resolutions adopted by Georgia Farmers' Union that the bill now pending in Congress which proposes to appropriate a sum of money to each State for agricultural education, providing the State will appropriate a similar amount, known as House bill 18160 and Senate bill 4563, be heartily indorsed and supported.

J. F. MCDONIEL, *Secretary Treasurer.*

REPORT ADOPTED BY THE ASSOCIATION OF SOUTHERN AGRICULTURAL WORKERS AT NASHVILLE, TENN., NOVEMBER, 1911.

Your committee appointed to consider agricultural education in secondary schools beg leave to recommend the adoption of the following resolutions:

"*Resolved*, That this association favors national aid to agricultural education, (*a*) by appropriations by the National Government to the colleges of agriculture for extension work in agriculture as approved by the Association of State Agricultural College Experiment Stations; (*b*) by appropriations to the agricultural colleges for the encouragement of the teaching of agriculture and domestic science in the secondary schools of the several States, according to the plans desired by each State.

"*Resolved*, That it is the sense of this association for the betterment of secondary agricultural and domestic science education that more of the basic sciences be given in our high schools, wtih ample laboratory equipment.

"*Resolved*, That agriculture and domestic science be made an integral part of the rural high schools curriculum."

H. A. MORGAN.
W. S. CALVERT.
E. S. RICHARDSON.
J. S. STEWART.
P. H. ROLFS.

STATEMENT OF MR. B. F. HARRIS, VICE PRESIDENT FIRST NATIONAL BANK, CHAMPAIGN, ILL.

Mr. HARRIS. Mr. Chapman and I are the only ones here to speak for the bankers, and I will take not over 10 minutes. I am president of the Illinois Bankers' Association, also a member of the executive committee and chairman of the legislative committee of the Northwestern Conference of Twelve States, of which Mr. Chapman is chairman. I am also a member of the American Bankers' Association committee of seven, and a practical farmer.

I think nothing could be added to what Mr. Butterfield and Mr. Soule have said concerning the value and importance of this work. The Lever bill and the McKinley bill were the first two demonstration bills introduced. Now, this talk is not for the McKinley bill or any particular bill. We want field demonstration, which I think is going to work out through the Lever bill. The best demonstration of the demonstration work has already been made, and it isn't a theory. It has been a demonstrated fact for seven years in the South, with over 500 men now in the field, and since demonstration work began, taking the work right to the farmer for the sake of the farmer and not for the sake of the science—we want science, but we want to take it to the farmer, for its value has been absolutely demonstrated

and we can give you the evidence that has been produced right in the South. It happens also that the minority party made the first appropriation to the South for that magnificent work, and I understand that $340,000 is now going to the South, which amounts to something like $40,000 a State.

Now, the interest of the bankers' association in this work grows out of this fact—I can tell you about Illinois, as my own State, as an illustration, which is more or less true of other States. There are 1,770 bankers in Illinois, and 65 per cent of the bankers own farm lands, and we have a record of over 2,600,000 acres in Illinois owned by bankers. Now, what we want is not extension work, so called, but demonstrations, pure and simple, just as Dr. Soule has told you, and we want it all over the Nation. We are prepared to support such a bill, and we know any number of farmers' organizations who would help out in that work.

Now, I want to bring out two points, and, as Mr. Soule has said, I don't want to be misunderstood in these two points, but they run along this line. For instance, under the bill as proposed Minnesota would get in the first two or three years perhaps $7,000. Hardly enough money to start with. The Southern States are getting, say, about $40,000, and when we have seen the magnificent results of the demonstration work and corn clubs in these Southern States—the Agriculture Department has lately undertaken the corn-club idea in other sections of the country, but now tells us it will have to stop this work outside the South—I can not see in all fairness how our request for this work can possibly be denied. If I wanted to speak in a very selfish and a very mean way, I would say, speaking for Illinois, that this money that goes to the South has been used to teach the South how to raise corn and hogs and not buy the corn and hogs from Illinois that they use to buy. But God bless the South and all the work that has been done in the South. The success of the North and West depends upon the success of the South, and we all know that, and we are all keeping that in mind. Now, Illinois, on an estimate of the amount paid by the State to the Federal Government of the amount appropriated, gives toward the $15,000,000 appropriated for the Department of Agriculture—in its internal revenue and imports—$1,000,000. Illinois gives toward its own agricultural department half a million. The Department of Agriculture gives to Illinois less than $100,000. So, in all fairness again, it seems as though we should come in and have some part of the good things as well as our friends in the South, and Federal aid is needed to promptly stimulate all the States.

Now, Chairman Lamb has well said, and we can believe without any question, that this is not a political committee, this is not a political proposition. It is in a higher sense a political proposition, in the sense that the best business is the best politics. Now, the matter of not getting our appropriations too high, and that this may help to do it and carry it over the line, ought not to be an argument against this measure. This is the best investment we have ever made. Why shouldn't we have a hundred men traveling over Illinois adding 10 to 15 bushels to the yield in each county? There is one in every county in Alabama. That is the way this bill will work out eventually. If a bill along this line, giving to all the Nation what has been given so splendidly to the South, is

not put into effect, the farmer is going to find fault. We are going to find fault, and the Republican Party will use it as a point of argument that they helped to give some of the Southern States this money, and the party in power now is not inclined to give this money to the rest of us. If you do give this money you make a friend of the farmer; the Republican Party can not kick; you profit, and we all profit. Now, as I say, it is not a question of whose bill it is. It is demonstration work that we want. Every one of us is going to work for that bill. Mr. McKinley will do everything in his power, in his party in the House and in the Senate to aid it, and this bankers' association and all of us here representing the banking interests of the entire country will be behind this proposition and this committee and the present party in power. It is big business, and the biggest business that ever happened.

As I say, I don't want to be misunderstood in bringing in one or two of those points. They are not brought in in the way of politics merely, and I know you all understand that, but it is a vital point, and it is to overcome the feeling that seems to be in the air that the party wants to keep the expenses down all they can. That is well and good, but as I say, this is an investment, not an appropriation. It must be looked at in that light and we will all help to hold up your hands, and if you have any literature to give out on this subject we will be glad to have it, and the man whose name that bill bears, and the party that is responsible for putting that bill on the statute books, will have the biggest thing to his credit that ever happened for the upbuilding of this country.

Senator SMITH. Both parties will have it, the Republican Senate and the Democratic House.

Mr. HARRIS. I don't mean the Republican Party or the Democratic Party in the narrow sense. It is for all the parties and all the people, and I want to tell you that this is a business proposition, and I hope you will find that you can look at it in that way.

I thank you very much.

Dr. THOMPSON. Mr. Chapman, of Minneapolis, chairman of the committee on agricultural development of the American Bankers' Association, is here. We shall be glad to hear from you, Mr. Chapman.

STATEMENT OF MR. JOSEPH CHAPMAN, JR., VICE PRESIDENT NORTHWESTERN NATIONAL BANK, MINNEAPOLIS, CHAIRMAN OF THE COMMITTEE ON AGRICULTURAL DEVELOPMENT OF THE AMERICAN BANKERS' ASSOCIATION.

Mr. CHAPMAN. This matter is one in which the bankers—not alone the bankers, but the business men—of the country are just as vitally interested as the farmer, because we know that the wealth of this country comes from the farm. I come from the State of Minnesota, and during my lifetime, and I am not an old man, by any means, I have seen the production of wheat fall from 30 bushels per acre to 13 bushels per acre, and I have seen the population of Minnesota—one-third of the population of that great State—crowded into three large cities of the State. I offered a prize at one time of $100 to the boys and girls in the rural schools, in the seventh and eighth grades, for the best hundred-word article on "Why I am going to

leave the farm." Gentlemen, I knew as a certainty that they were going to leave the farm; they have been leaving the farm; but I wanted to know for my own purposes and in their own language the reason they were going to leave the farm. I expected to get about 200 replies, but there were over 2,000 of them, and they came from all the States in the Union, from Oregon to Illinois, and in every one of those replies was this one reason, "I want to go to the city to get better educational facilities." They think we have them in the cities.

Now we analyzed the school statistics of 1909 in Minnesota and we found there that the State of Minnesota was spending $14,000,000 annually for educational purposes, to educate 435,000 school children in our schools. And of that number 1,832 were in our agricultural schools and colleges. In other words, the agricultural State of Minnesota was educating at the expense of the State 99.6 per cent of the coming generation to be consumers and four-tenths of 1 per cent to be producers. We have a million people in Minnesota living on farms. We have three men from our agricultural college who are doing extension work among that million people who live on their farms. Gentlemen, these figures show conclusively that the farmer will not go to the college to get this education. His boys can not go, in many instances, and there is only one thing to do, and that is to carry the education to the farmer and to his boys on the farm. We have been greatly impressed in our State on this question by the results obtained in the South by the Department of Agriculture here at Washington in the corn clubs and in the field-demonstration work, and that is what we stand for. We want the same thing done all over the Nation. We want the man on the farm to know how, and the only way he is going to know how is for some one to come and tell him. In Representative Hanna's country, in Fargo, a year ago I talked to 1,500 farmers crowded in the opera house, and there were four or five hundred that could not get into the opera house and had to be turned away. There is no difference of opinion among men who have investigated this question as to whether the farmer wants this knowledge. He knows he has absolutely got to have it. He is discouraged from the results obtained from his farm, and he knows he must have this knowledge if he is going to succeed.

The eyes not only of the bankers' associations of this country and of the commercial clubs, but the eyes of the whole Nation are on this committee to see if you now can do something for this condition of affairs that exists in this country. For over 100 years we have neglected the farmer in educating him in his business. He is a back number absolutely as compared with the other business men in the country, and that is due to the natural conditions which surround his work. He has no opportunity to get in touch with the march of events, and it is the duty of the Federal Government as well as of the several States to carry this knowledge to him on the farm. He is ready for it; he is waiting for it. And I hope, and every member of our committee here hopes, that this committee will be liberal in their appropriation for this work. We are not going to say how much you ought to give. You gentlemen know how much you ought to give just as much as we do. You are just as well posted on the conditions in this country as we are and probably a great deal better. All I can say is this, that you are going to have the hearty coopera-

tion of the bankers and business men as well as the farmers if you do your duty in this matter and appropriate the money to send these demonstrators onto the farms.

I thank you.

Dr. THOMPSON. Mr. Chairman, the agricultural people interested in this matter, I am sure, are gratified that their forces are organized and to know that the agricultural extension principle has come up before this Congress. This question of course is going to meet with opposition, but we are delighted that other organizations are interesting themselves to help this work. The National Soil Fertility League has been interested in this movement and have a representative here this morning. It is not to be expected that all these different associations will have exactly the same point of view, and I want to assure you all that our association is only interested in the main issue. I shall be glad now, with your permission, to introduce Mr. Howard H. Gross, president of the National Soil Fertility League.

STATEMENT OF MR. HOWARD H. GROSS, PRESIDENT OF THE NATIONAL SOIL FERTILITY LEAGUE.

Mr. GROSS. Mr. Chairman and gentlemen, we have for consideration probably the greatest economic question that has been before the country for many years. Our principal asset lies within 18 inches of the surface of the ground, and when the farm shall fail to produce an adequate food supply for the people we are nearing the end of prosperity and progress. Speaking for the business interests and not as an educator, I have observed the splendid work that has been done by the colleges of agriculture for many years. I was connected with the Department of Agriculture at one time as a good-roads expert. I have attended hundreds of farmers' institutes in scores of States. I have heard such eminent gentlemen as Dr. Soule, Dr. Butterfield, Dean Russell, and others get up before the farmers and tell them the story of better farming. I have read wagonloads of bulletins written for and sent out to the farmer, but the fact remains that the farmers with few exceptions follow the practice that has obtained for generations. As a rule the bulletins are written over the head of the farmer. He can not understand them or apply them, nor could any layman, and, gentlemen, I can say that few Members of Congress could read these bulletins and understand what they meant to the extent of going out on the farm and putting them into practice. We have had one talkfest after another, and we have reached the point where it is necessary to demonstrate, to show the farmer the application of these theories upon their own fields.

The farmer is alert to a concrete fact. He is impervious to a theory that is not demonstrated. He is not prepared to take anything for granted, but show him a concrete proposition and there is no man who is quicker to take it up. He realizes that in his avocation he is surrounded by many difficulties. There are pests innumerable above ground and below, weather conditions, soil conditions, and all sorts of things that call for skill, intelligence, knowledge, and special training if he is to succeed. The banking of to-day is a good deal like the banking of to-morrow or next day; but farming is constantly changing, and of all vocations there is none that

requires more skill, that calls for more training if you are going to become efficient. The corn average for this country for 10 years is twenty-five and a fraction bushels to the acre—absurdly low. Under training farm boys will go out and raise three or four times as much, and do it readily. Here is a little card that most of you have seen which shows the comparative yield between the same area in Europe and in this country. They are raising in Europe two or three times as much as we are upon land that has been under the plow for thousands of years longer than our land has. Take this map [United States, and indicating], all over the East and Southeast the soil has been largely depleted, in some instances to such an extent that it will not pay for the labor placed upon it. We have been mining and taking out the fertility of the soil, shipping it away and robbing the future of its heritage. Now, it seems to me the time has come when we must commence to build up instead of tear down, to augment rather than deplete. As the gentleman said here, my friend from Minnesota, that he remembered the time when he raised 30 bushels of wheat to the acre, but that they only raise 13 now. Gentlemen, in this country the population is outgrowing the production, and we are fast reaching a point where, under the present methods of farming, we will not be able to produce enough to feed the people. And do you know that we are the only country in the world where all classes of people eat the same kind of food? Our laboring man has meat three times a day. The European gets it once a week or on holidays and the oriental not at all.

We must do better farming or establish different living conditions. It is imperatively necessary that we should apply to our farms business methods. Science is after all only crystallized common sense reduced to the form that makes it practical to use. There isn't an intelligent farmer in this country that doesn't realize the need for help. He knows full well that he is not getting the returns for his labor that he should. He knows that science can help him, but it is a difficult science to understand. Many years ago Denmark was in distress, the people were poor and hard pressed and the Government decided that something must be done to develop agriculture, and they began to strengthen their agricultural colleges. They established auxiliary schools, and they helped. They sent traveling schools over the land, visiting a community and staying a week or 10 days, and then moving on. That was good, but none of these or all of these got the results sought, namely, to put into practice on the farms of Denmark the best method of cultivation. So they sent out the demonstrator to go into a locality and stay there and study local conditions, to ascertain what the problems were, to meet the farmers face to face on the soil where the problems lay, and to help them to understand and apply the best methods of farming.

When you improve agriculture everything else improves, because that is the foundation upon which everything rests. Better agriculture means better banking and better commerce. Everybody is helped because we draw our supplies from the soil. So the work of the farm demonstrator, together with the better financial system and the other auxiliary helps, brought Denmark from poverty to thrift. Now the average yield of wheat per acre for the whole United States is fourteen and a fraction bushels. In Denmark the yield is 40 bushels per acre, in Germany 28, in England 32, and Belgium 34.

The experiment station in Ohio has been working on wheat especially for 20 years, and their average is something like 35 bushels. Gentlemen, the brain is the best fertilizer. The thing is to know what to do, and to do the right thing in the right way at the right time, then you get the results.

So the situation is this, that it is the duty of the Government under the general welfare clause to do whatever is necessary to be done for the benefit of the whole people. The people in Boston are interested in the corn crop of Iowa, Illinois, and Georgia. State lines must disappear when you come to the question of production and distribution, and we can not differentiate and say that such a State must have this and such a State must have that, because every State is interested in the welfare of every other State. So what must be done? Fifty years ago, almost exactly 50 years ago, colleges of agriculture were established by act of Congress. It was a great conception and a splendid step forward. Why was it done? Essentially and primarily for the benefit of agriculture, to help the farmer to know better how to farm, with the idea that our greatest national asset was the soil, and that it must be used and conserved and passed on to succeeding generations unimpaired in usefulness.

Twenty-five years ago the experiment stations were established to ascertain knowledge, to investigate and experiment and find out what ought to be done under given conditions. Or, in other words, what will produce the highest efficiency for the time, labor, and money involved. That is the business end of it. So these agricultural colleges are business institutions endeavoring to show the farmer how he can get the highest reward for his effort. And the result of the farmer's labor comes home to every one of us. Without the farm there would be no Broadway, no State Street, no anything else. So the highest concern of our country, from an economic standpoint, is to maintain the fertility of the soil, to build it up in usefulness and furnish to this population an adequate food supply, and give us a large volume for export to feed a hungry world. What is our duty? My friend Harris owns a farm, perhaps a dozen of them, but in the higher sense he is not the owner of that farm. It is his by action of law. He acquired it from his ancestors and he may hand it on to his successor, but that land was placed there by God Almighty and dedicated to humanity, to furnish a food supply for all times, and neither he nor any other man has any right to misuse that land, to rob it of its fertility, and turn it over to his successor impaired in its usefulness.

Of the institutions available for doing this work of farm demonstration, the agricultural college seems to be the only one in a position to meet the situation, for the problems of Florida are not the problems of Minnesota; the problems of Maine are not those of California. Every State then has its own situation. The farmers of each State know their own agriculture-college men, and those men know them and can take them by the hand and call them by name. The agriculture-college man and the experiment-station man are regarded by the farmer as his guide, philosopher, and friend. If this work is to be done efficiently it must be done through the agriculture colleges. It can not be done from one central station, although the Federal Department of Agriculture can be of great assistance. Their work in the past has been magnificent. The problems solved by it stand unparalleled in the history of the country or of the world.

But it has its limitations. Suppose we sent Dean Russell here, a man who stands high in his profession, to the State of Georgia. He would not feel at home; he would not understand the problems of Georgia any more than Dr. Soule would understand the problems of Wisconsin. So if we are to have this thing done effectively it must be done under the direction of the colleges of agriculture in the respective States by a great cooperative plan, in which the Federal Government shall be a part. I believe in vocational education. I believe in many things that would benefit this country; but, gentlemen, above all in importance is this idea of getting into practice on the farms the vast fund of information, the knowledge that has been gathered in the last 50 years by the students and scientists by research and experimentation, and which has remained practically in cold storage all these years. Why not get it out upon the farm and put it to work? Let us liken this body of knowledge to a great irrigation scheme in which the Department of Agriculture is the dam where is gathered the water—this information. These colleges are the channels that go out into various parts of the country which are to be benefited. So long as the water is penned up, so long as it is in these main channels, it is doing very little good. The value depends on getting it out on the cultivated field.

Now, then, this proposition that we have before us is to get this information to the man who needs it, to the man who wants it, and the man who has a right to demand it. This information has been gathered for his benefit, and he has a right to say to you, "We have paid the bills, we have waited many years for this information, and we want you to get it to us in such form that we can understand and apply it." No way has ever been found so effective, efficient, and successful as to get the man who knows down on the ground beside the man who wants to know, and then the problem will be solved. The matter covered by the Lever bill is not a matter of quick growth; it is one of evolution. This thing has been in the air for years. The colleges of agriculture have been working on it for a long time, and their work has been so good that it has attracted the attention of men outside their ranks. The bankers have observed it, and commercial bodies and other large interests have recognized it. Now, the public is beginning to see the importance of agriculture to our whole life, and if this country is to continue to grow great and to go on in the vanguard of nations, we must reconstruct our whole system of agriculture. The country that furnishes the food supply will have the money, and it will be in a position where its voice will be heard in the council of nations with far more influence than if it simply had battleships to support it. For, until men can learn to live without eating, the nation that holds the bread basket will have the commanding position. We must maintain that position. We can do so if we will, but we must reconstruct our agricultural system to do so.

Now, it has been said that it costs a lot of money. If we capitalize the amount of money that has been expended for getting this information on a basis of 3 per cent, the loss of interest on your investment would pay the appropriations asked for by this bill several times. So the quickest way to save money, the quickest way to get results, is to act on this proposition at once. It only calls for $500,000—about half a cent per capita. The people would never

know whether they paid it or not, but they will know and appreciate the benefit that will flow from it. In 10 years the amount goes up to $3,000,000, probably 3 cents per capita. The States are required to furnish as much more or they will receive nothing from the Federal Government. The agricultural colleges and experiment stations established by the Federal Government have been successful, and this is the next logical step in order that hey may complete the work so well begun. Now, gentlemen, I have received many letters, largely from agricultural college men and large institutions all over this country, indorsing the Lever bill and this definite proposition, and I want to say to you that I have talked with over 100 Members of Congress on this proposition, and I have yet to find more than two who did not say right off the reel that the proposition must go through; that the time is ripe for it, and that they were prepared to support it. I hope that this committee will report this bill for passage unanimously; that it will be put upon the calendar and advanced under the rules to early consideration, and that before this Congress adjourns we may have accomplished the greatest piece of constructive legislation that has been before Congress for 50 years.

Dr. THOMPSON. Dr. Edwards, of Rhode Island, is here. He did not come expecting to speak on this bill, but he is in the city, and we would be glad to hear from him for a few minutes.

STATEMENT OF DR. HOWARD EDWARDS, PRESIDENT RHODE ISLAND STATE AGRICULTURAL COLLEGE.

Dr. EDWARDS. Mr. Chairman and gentlemen, I did not come prepared to make a speech at all. I happened to be in the city at this time and I am simply here now in order to express my deep interest in this matter. I represent, or rather, I am from one of the smallest States in the Union and one with the smallest amount of agricultural population, but it doesn't seem to me that the question of agricultural population enters into the consideration of this bill at all, for the interests of the agricultural population are also the interests of the manufacturing and industrial population.

In our State we have been carrying on for some 8 or 10 years some agricultural extension work. We have been given by the State legislature, I think, something like $4.000 a year to carry on this work, and that has met with the entire approval, the enthusiastic approval, of the inhabitants of the cities. They have recognized that that part of our agricultural work is perhaps the most important part. And so I think we may take it as an established fact that no opposition to this bill will come from the industrial population of the United States, if I may judge by New England.

The idea of carrying the necessary information to the farmer is not a new one. It has been thought of and worked upon for many, many years. Before I came to Rhode Island I was in the State of Michigan, and there were carried on farmers' institutes for something like 40 years in that State, so that this is not a matter which is new at all, but it is a matter whose necessity has grown more and more apparent as the years have gone by. It is simply a question of informing this generation and the generation immediately following—whether we shall reach them or not. Men who are already en-

gaged in agriculture can not find time to go to college in order to learn. The knowledge must be carried to them, and if we can carry it the situation will be saved sooner—far sooner—than if we do not carry it. This is the whole question, in my mind. I have no doubt whatever that some time in the years to come things will get to such a point that the whole Nation will have to turn to the problem of agricultural production. The question is, however, whether we are ready and willing to save the situation before it becomes desperate.

I do not think that I can add anything particularly to what has been said, and so I simply emphasize those two points—if they can be so called—first, that this bill is as much in the interest of the industrial population of the United States as it is in the interest of the farmer himself. Second, that we have before us a question of saving a situation, of retrieving the position of the United States as a productive agricultural nation before it is entirely too late. When, as has already been pointed out to you, the production of wheat in a great State decreases from 30 bushels per acre to 14 bushels per acre, it seems to me that it is entirely late enough, that we have gone far enough in the process of exploiting the soil of the farm, and that the time is now right to undertake extension work; that we should make a different arrangement so that that production may no longer decrease, but that we may increase it.

I have in mind one particular farm in Rhode Island where, through the application of agricultural knowledge, through the application of scientific knowledge, the production of hay has been increased from 400 pounds per acre to 3½ tons. And that purely and simply and absolutely, without any question whatever, is the result of the application of the knowledge that we have at present at the college ready to communicate to the people. The only drawback is that we haven't the means to carry that knowledge as far as it should go.

President Soule spoke of the number of letters received from farmers asking questions concerning the problems on their farms, and I can testify that the same thing is true in Rhode Island. There is not an agricultural college president, I suppose, anywhere that can not point to the same thing—these people that are crying for information and help. There is no limit to the class of people that are interested in this work. Not long ago I had two nuns that came to my office to find out about their peach trees. They were trying to help out their organization by raising peaches. They were in difficulty and they came to us for information, which, of course, we were glad to give them. The great trouble, however, is that the average man does not come, and he won't come—or, rather, he can't come—and it is for us to carry it to him.

Mr. LEVER. Mr. Chairman, if you will permit, we have several more distinguished gentlemen here that would like to be heard upon this bill, and I suggested that we have a hearing of the committee to-morrow morning. We want to divide up our forces and have part of them go to the Senate and appear before Senator Smith's committee and the others appear here, and I ask that the committee meet to-morrow morning.

The CHAIRMAN. I take it that will be agreeable to the committee, and it is so ordered.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Friday, March 1, 1912.

The committee met at 10.15 a. m., Hon. John Lamb (chairman) presiding.

The CHAIRMAN. Continuing the hearing of yesterday, we have the pleasure of hearing Gov. Herrick this morning.

STATEMENT OF HON. MYRON T. HERRICK.

Mr. HERRICK. Mr. Chairman and gentlemen of the committee, I hardly thought that I had the temerity to come before this body and attempt to tell you anything that you do not already know, and I do not mean to try to do that; but everybody who is looking at a subject is liable to bring something new to it.

I have been interested for the last two or three years especially in this subject, and I want to speak of that, perhaps in order to qualify myself to say something upon the subject; that my interest is perhaps due to the institution with which I am connected and my appreciation of what is happening in our community and in our State and which has been happening in many other States—that is, the great depreciation in values, which, I think, is about a hundred million dollars—Dr. Thompson, of Ohio, can tell you about that—in the last 20 years the depreciation has been about that. Our attention has been directed to this subject, and I have been encouraging, within the reach of our locality as far as possible, the farmers who desired to adopt new and scientific methods in bringing back the farms in that region. That is the way I became interested.

I found in the beginning that I could encourage farmers in this locality to borrow, or rather to take up scientific methods, because the institution which I represent—I will take a little occasion to advertise it—has 95,000 depositors and something over $55,000,000 deposits, and being a mutual concern, therefore we possibly give more attention to that side of the subject, which is not mere money making, than otherwise we might. So I found that this was the case in our locality, that farmers did not dare to make the investment which was necessary to bring back an old farm, because it takes three years at least to get it started; and they had to get a loan either for three years or for five years, for a definite time—it was difficult to get it, generally—and at the end of that time, if they renewed it (and they might not be able to renew it) they had to pay a commission for it. Therefore, if a man is to buy a farm and rehabilitate it, the financial question was the first one that met him. Now, we encouraged people to buy farms and rehabilitate them and to lay out a plan of campaign to make that soil what it originally was; because they knew if they borrowed of our institution that they could have the money as long as they wanted without renewal. We have loans that have been in our bank since 1854, because anybody who pays the interest—and we make the lowest rate possible—can always have that loan.

Now, that was an object lesson to me and caused me to look into the subject, believing as I did that one of the fundamental troubles in this situation is that the farmer is not financed. There is no scheme or system in America by which he can finance himself like

the railway, the municipality, or the manufacturing enterprise, and that is one of the fundamental difficulties in this whole situation. And I wanted to take it up along that line, because all that has been said yesterday is a preparation for something that the people in America have awakened to the vital necessity of accomplishing. All that argument is a part of this; but I maintain that an essential part, and a necessary part, and one which you can not go very far without, is this very financial question.

Now, I want to make a comparison between the conditions in two countries that I observed last year; and by reason, as I say, of having looked into conditions, and by reason of having become acquainted with them, this is what I believe to be a manifest need. I have made my investigations along this line, rather than the one on which the arguments have been made; I have made investigations in these different countries, and I want to bring to your attention two example in Europe, the most conspicuous ones of all Europe, England, and France or perhaps Germany, and show the contrast between them. We will take France. Last year I had occasion to look into and study that question in those countries. I happened to be in England at the time of the great railway strike, when the transportation facilities were cut off and the people of England seemed to have appreciated themselves, practically for the first time, that the supplies of England all came from outside—from America, from all places—it was like a great city; and, therefore, when that strike came along everything was paralyzed, and in 24 hours they were facing starvation. In other words, England is all out of balance. They have given their whole attention in all these years to other matters to the neglect of agriculture, until they are not a self-contained country. They are the most conspicuous example among all those greater states of a country where the soil is not tilled and where agriculture has no place, practically; and England is at the mercy of the other powers because of that. Now, I maintain that any country that is in that situation is in a very dangerous one. They had to settle that strike. It was necessary to settle that strike immediately almost. Any power which attacks England to-day has only to cut off England's supplies.

Another thing is the effect on the people, the country people, all through the country. As you go through the country, perhaps, on an automobile trip you see people walking along hunting jobs, hopeless-looking men and women, sometimes having children with them. You do not see it in these other countries. The very fact that the producing factor of the soil is not used is one of the great weaknesses of England; and it occurred to me then, upon seeing all that, that it carries us back to that period preceding the French Revolution, when France was in that condition; then, if you cared to follow it further back, it carries us back to Rome, to Italy—in fact, every civilized country where they do not cultivate agriculture; they are out of balance; they are not a self-contained country. That is most emphatically illustrated in England to-day.

Now, to go across the channel and consider France. They came out of that condition; they were in that condition preceding the French Revolution; and all that was said here yesterday was with regard to a period after that. Nearly 200 years ago they began to restore agricultural conditions in France. But they began most actively about

the middle of the last century, and the great impetus that was then given to agriculture in France was given when, along with the agricultural education which we were talking about yesterday, they finally established a financial system for financing farms. Now, France, when we got over there, was just on the verge of a war with Germany. But France's condition was this: It was a self-contained country because of its agricultural interests; there was thrift, happiness, peace, and prosperity throughout the entire nation; no people hunting work in the streets. With three hundreds of millions in their treasury, they were a self-contained country, ready to fight Germany if she wanted to fight; but Germany could not do it, because Germany needed too much money; they were not in a financial situation to fight France. But here was the contrast between two countries, the one that has taken care of its agricultural interests, that has financed its agricultural interests and put them in shape, and the other that has not.

Now, to come back to our own situation at home. We since the war have been engaged in promoting our infant industries, and it is about time that we gave some of the milk that we gave to the infant industries to the senile agricultural interests, because it is the fact that the brains of the country, as well as the foodstuffs, come from the country to the cities. And we have begun now to realize, I think, that this is true, for the simple reason that, while we had plenty of land originally, it has been going down in all these States and in all these years; and we have waked up to the fact which these statistics so clearly prove—I am not going to read this—that our consumption is outrunning our production. I think it is about 23 per cent increase in acreage in the last 20 years, 36 per cent in production, and about 60 per cent in consumption; and there are statistics for the last 10 years and 20 years that are startling. If we were to continue that ratio—which we will not do, because the great American people are alive to this situation—but if we were to continue that ratio for 8 or 10 years we would be buying food, looking for food in other countries to purchase for our own.

Now, in connection with what is being done, and what this committee is proposing to do, I echo the sentiment that was expressed yesterday, that there is no committee of Congress that is to-day considering such an important measure; no committee to which the country is so anxiously looking for relief as to this, because we are gradually coming up to the situation where the people appreciate that we have got to do what Germany and France, Austria and Denmark, and all these countries have done. We have got to do all that has been argued for here, but we will not succeed in this thing until we establish a financial system for carrying on this greatest of all industries.

Now, I think I can explain why farm securities are in such bad odor throughout the country. I will just give one illustration of this, because I do not want to bore you. Not many years ago, you all remember, the Lombard Investment Co., the Sharp-Conklin Co., and many others in the West that were so prosperous in selling mortgages all over the East; and there was no security that was so eagerly bought, because they had big rates, they charged big rates and got big commissions; and they made no end of money; and they sold those securities all over the United States to anybody who had saved up any money. Those institutions had no Government supervision;

they were just under the ordinary incorporation laws of the States; some of them were partnerships. I am not impugning the motives of those people, but that thing happened which has happened in the heyday of prosperity to any propaganda that goes into a business without, perhaps, considering the economic side of it, and the result was collapse and a disgust on the part of every banker and investor in the United States toward farm securities; and that feeling toward farm securities exist to-day. Now, I want to suggest another thing of that sort that happened where it has been rehabilitated. In the panic of 1873 there were many building and loan associations, and the building and loan associations had borrowed from Europe, which was economically proper and sound; and the plan of building and loan associations has proven to be economically sound. But we inaugurated building and loan associations throughout the United States, and they prospered; but in the panic of 1873, with the recession of prices, and as they existed largely in the boom towns, pretty nearly every building and loan association in the United States failed.

In my city they all failed; there were upward of a hundred of them; every one of them failed, so that the people who had invested in building and loan association securities were in the same frame of mind as the people who had invested in these farm securities; they were disgusted and thought the whole thing was no good; that was the idea that prevailed. But these cities, appreciating, and the people appreciating, that the building of homes was a necessity with our great manufacturing growth and the great cities of the country that money must be had to build; and they went to work carefully and painstakingly, and on the ruins of these institutions they built sound economical building and loan associations; but they only did it when they had the government—the State government—assisting them in the creation of them, and they had State inspection and all those things. Now, you don't hear of a building and loan association failing at all now that they have been rehabilitated; they are economically sound and offer a safe plan for financing the home of the workingman. That has been rehabilitated, and that has been accomplished. But no one has attempted in this, the greatest of all industries in America, to do anything toward rehabilitating and putting in place the farm loan, or providing a place where the farmers can finance their operations.

Now, in my experiments which I have referred to, in relation to my own institution I took it upon myself—I became casually interested and do not pretend to know very much about it; but I have for three years been giving this question some attention. I began by looking into the German system, the French system, and the Austrian system; but I will not go into those things any further than to speak of two examples of institutions of this kind which have been successful; but I will say this, that the gentleman spoke here yesterday about Denmark; the gentleman spoke in regard to the situation in Denmark. They did all that we expect to do here in the way of intensified farming; they did that; but Denmark was rehabilitated when they established a financial system to go along with that and which is a part of it, and therefore while it may not be a question in connection with this bill, such a system is a question that is bound to come up and should be studied in connection with this bill.

Now, in Germany 140 years ago they began to rehabilitate agriculture there; and a year ago last summer I began to look into the different associations there—the names of which I could not begin to pronounce; I think Mr. Chamberlain can pronounce them. But I did discover this, and it was of tremendous interest to me, and I could not find anything in print anywhere here, in the Agricultural Department or anywhere else, illustrating these financial systems in these different countries, but I found it in Germany: When they were in the situation that we are now in in America; when they found that the people of Germany must be fed, and when they found that the best product of that nation was the young men and the boys of the nation, they established continuation schools for the boys after they left the schools; they established those schools and they educated their boys in farming, for work in the factory, and in the trades, so that they do not come to this country at all; all of those who have had this education and are good for anything stay at home; they only send those who are of no account. They did not accomplish anything until they established these farmers' societies and until they established a system of financing the land, the same as you would finance a municipality.

Now, what they have accomplished in Germany, and what they have accomplished in France, is precisely this (and I speak from the book, because it is the fact); they have been able by a set-up, by a plan of arranging for financing the soil for a long time, 10 or 15 or 20 or 75 years, they have been able to improve, to create on this security—and why not? Because it is the best in all the world, because everything comes from the land—to base upon that security by governmental supervision and governmental inspection to establish by set-up a security on which they can base a bond and send it out to the public and sell it alongside of the municipal bond in the markets of Germany, delocalize it. A loan on a bond in the Leipzig district will sell on the exchange in Berlin as readily as it would at home; the system has delocalized and mobilized these securities and made them as liquid as a municipal security. I state it as a fact. You know what a municipal security is and why you can sell them everywhere. By this system they put alongside of that, and it is really the choice, the choice is in favor of the farm security, and the farmers themselves buy those securities, and when the discount rate goes up, as it did recently in Germany, along about January the discount rate on loan money—there was $12,000,000 or $15,000,000 that went out to Germany from one bank in New York, which loaned it at 7 per cent for 30 days. I inquired and found that these securities based on farm mortgages do not fluctuate any more than municipal bonds do in this country.

Mr. HAUGEN. Who determines the amount of bonds to be issued on each tract?

Mr. HERRICK. I have got it here among my papers.

Mr. HAUGEN. Very well, then; never mind, now. Just go right on.

Mr. HERRICK. I want to describe to you this Landschaften Association system and Raffaelsen system in Germany——

Mr. HAUGEN. I do not want to take up your time. If you will put it in the record, I will read it with great interest.

Mr. HERRICK. I want to describe to you how they operate this, because it is diametrically opposite from the system they employ in

France. The system in France, which began in 1852, is arranged by the General Government; but I want to get this in your minds properly because our condition is not very different and it is economically sound, and that is this: That it is possible in this country to-day to base on the farm loans which have a bad name now; it is possible and it is feasible, by means of a little legislation and attention on the part of the State governments and the United States Government, to make up a set-up and issue a bond that will stand in the market beside a municipal bond. Let us take a municipality. A municipality wants to improve streets, it wants to build waterworks, and to do all these necessary things. Say it is a town of 4,000 or 5,000 people in the midst of a farming community. It is based on the property of those farmers; this plan is based on the fact that the town is in a good farming community, and it is supported by the farming community. Now, is not that farming security a better security than the village security?

Mr. HAUGEN. Certainly.

Mr. HERRICK. Now, if they depended on the local banker to furnish them money to do this, and he was to collect it from the individual taxpayers, that security would not have a very broad circulation; it would not get outside of that town; but when those people all get together and say, "We are going to have waterworks and street improvements, and so on," and pledge their security, then that security is as broad as the Nation. That is exactly what would be done. I maintain that this set-up is just as feasible and can be accomplished by making the same kind of arrangement, based upon a public security; and I back that up by saying that it has been done in all these countries and we have not heard a word, hardly, on that subject in all this country. Now, this is true; that has been accomplished in Europe.

Now, in Germany the way they do it is this—and just a word on that. While looking into this question, and looking at the trade schools and the extension schools in Munich, and looking up the subject of craftsmen, I had a talk with the head of the Hamburg-American Line, and I was introduced to the Emperor as a man who knew more about the subject than anybody else; and I want to give you his words, because they are impressive. He said:

> We had our educational institutions; we had our agricultural colleges; we knew chemical farming; we knew farm accounting. We knew all these things, and we never got anywhere until the Government got hold of it and formed a plan by which the land could be financed, and then we made our great progress in agriculture.

The CHAIRMAN. Could you give us the modus operandi by which they do it? There is no question about the plan; we understand it in the case of municipalities, but we do not understand how we can get the cooperation of the farmer.

Mr. HERRICK. That is the thing I am more interested in than anything else. The landschaften associations are societies of farmers. The members have the right to issue mortgage bonds based upon mortgages issued by the association. Take the half of a State or the whole State; they want the benefit of cheap money. Now, they say, "This land has gone down in price. We want to bring it back, but in order to do that we have got to have money for a long period, and we have got to know that we can have it for a long period. We

can not afford to risk what little money we have got"—I am assuming that somebody has some to put in—"we can not afford to put that money in there and can not afford to go into this enterprise if in three years we have to pay it, any more than a railroad can afford to pay within three or five years; we can not afford to pay all that money back again in that time or else depend upon a renewal and risk an unfavorable market when we want a renewal. We have got to have 20 or 50 years to pay it off. We will pay a little portion along; we will distribute it over a long period."

Let us take one State: The State authorities recognize—I am taking the State side of it, and I want to refer, in connection with France, to the National Government's part in it—the State realizes that we want to do something to bring this land back again. We talked that over with Dr. Thompson in our State, who is doing all this educational work. But they have not got the means to do it. He has done his part; but where are you going to get your money? Some insurance company will loan it to you for a little while and they may renew it; at any rate, they are going to have their commission.

Now, we will meet and have a law of this sort; that is, along the line of this: We will enact a law which will permit the farmers of the State of Ohio who want to borrow money to join an association—every one who wants to borrow money; this is the case where they did not have the capital to start it—we will pass a law, and we will appoint the governor of that institution, or the president, and we will appoint a director or two, if you please, under this law. We will have our banking superintendent, or we will have somebody who will make the inspections. We will lay down a rule that they shall not loan more than so much of a percentage on the value of that land; and we will make a law that if they are going to spend the money for underdraining or fertilizing, and we are going to loan them money to do that, we will see that they put that money in there. But when we get through with all that, we have the formation of a society by which all those people who want to join and borrow money can come together, and they can make mortgages to that society, which has its legal existence by the legislative enactment of that State, and they will make all their mortgages to it.

Now, in Germany there is the landschaften system, and they make their mortgages, we will say, at a rate from 3 per cent to 3½, 4, and 4½ per cent. They will make their mortgages to that institution. Then that institution, by authority and under the law of that State, will issue to the public a bond based on those securities grouped, and they will issue them to the public and say that the landschaften association of the State of Ohio proposes to offer a million dollars of bonds, or five millions of dollars of bonds, which will be sold to the public at such a rate of interest. They make a public offering of it and in every instance they are taken.

Now, they are taken for this reason: That the State of Ohio has pledged to the purchaser of those securities, first, that this association is formed of reputable men; second, that it is under State supervision and that this association will guarantee those bonds. This association takes one-tenth of 1 per cent for creating a surplus; but until the surplus is created each member agrees to pay in case of loss 5 per cent, not more. But they very soon build up a surplus. That society

will issue debenture bonds. That society will undertake the collection of those bonds for the bondholders—perform the disagreeable duty the tax collector does for the village, of collecting this money; and they guarantee those bonds to the investor in those securities, so that savings banks, and trustees of orphans' funds, and everybody else buy those securities. They will undertake to see that the money is collected, and guarantee the security, so that when the amounts of the bonds fall due the holder gets his principal and interest and the society stands by it; and it has the backing of the State in the credit foncier of France to see that it will be honestly conducted. And they have been honestly conducted, and they have been very successful.

This is one of the best forms that I have referred to. There are several of them.

Mr. McLAUGHLIN. May I ask a question? When a farmer makes a mortgage to this association he does not directly or at the time get money from it? I suppose the association waits until it takes a large number of those mortgages and then it advertises for bonds?

Mr. HERRICK. Makes a public issue.

Mr. McLAUGHLIN. Makes a public issue and issues its bonds; it gets its money and then it supplies the makers of the mortgages with their money?

Mr. HERRICK. Yes; that is, a society of this kind, because, you see, they do not put capital into it.

Mr. McLAUGHLIN. Is there any difficulty in getting farmers to make mortgages and pledge their farms to this association for a long time before they realize anything on it?

Mr. HERRICK. Well, at the beginning that difficulty arises in starting this off, probably; but very soon, in the case of one that is in operation, constantly making the issues, they do not wait for the large issues; they issue bonds of—we will say they issue it in marks—we will say 20,000, 50,000, or 100,000 marks.

Mr. TALCOTT. About what is the rate of interest?

Mr. HERRICK. They bear 4 per cent; 4½ is the highest, though some few are at 5. This is the way they do: The farmer who wants a loan at 3 per cent—sometimes bonds will sell at 3 per cent, and again you can not sell them for better than 4½. The man who wants 3 per cent and is in no hurry for the money will designate that he wants a 3 per cent rate on his, and therefore he will wait until the market will absorb a 3 per cent bond. The man that wants a 4 per cent rate will get his at that rate. Some are at 5, some 4½, some 3½, and some 3 per cent, and they go into those different classes as the market varies. Now, they have no difficulty in selling these securities.

Mr. MAGUIRE. Governor, do the farmers come in voluntarily to the organization, or are they forced by the enactment of law in certain localities?

Mr. HERRICK. No; they loan money to them in these institutions, and everybody who wants to borrow seeks them; there is no difficulty in getting them into the institutions. They embrace the whole agricultural sections. I will tell you another thing: These farmers' societies that are organized in all these countries and that are under authority of law and recognition of law, have this for their ostensible object: The farmers' society goes to the manufacturer and purchases goods direct from him instead of through the middleman; and another duty of the society is to sell the farmers' product to the

consumer as directly as possible. Now, these things are engineered by the societies of farmers that were started and promulgated by the Government; but that hits at the high cost of living, you see.

The CHAIRMAN. I can very well see how, this being a State function, the States can take it up, and if they can get the cooperation of farmers I can see how it would work out; but please tell us what we have to do with it.

Mr. HERRICK. Now, I will say that what you have to do with it is the subject that you discussed here yesterday, and that is this: That I maintain that while you go into this educational system, which I hope you are going to do, because the whole country is looking toward the passage of this bill as it never before has done; it is a psychological moment in the history of this country, when they are so interested as they are now—now, I want to say that what you are doing is a forerunner of what is to be accomplished along those lines.

Now, here is a thing that will answer your question: What the Government did in France—what the National Government did in 1852 in France—was done when they were in our situation exactly. In France in 1852 agriculture was at a low ebb, and therefore they decided that something had to be done to rehabilitate agriculture in 1852. Now, I am only taking one institution, because this is the one which the National Government of France had to do with; but I do not know whether this National Government can deal with this question; but France did deal with it as a national government, and they dealt with it in exactly this way: They caused to be established what is known as the credit foncier, with 200,000,000 francs capital, which the Government subsidized. They encouraged this institution to be incorporated for the purpose. They did not have communal loans then; that related to villages that did not have the plan of village securities that we have in this country. Therefore, it applies only to the land, and they subsidized it for one year. The stock was sold to people in 500-franc shares. They are selling for 750 francs now. They do not limit the amount they can make out of this, because it was a national enterprise for the restoration of agriculture. These shares sell on the Bourse at Paris. They started out to promote agriculture, appreciating, just as they do in Germany, that you can bring about all this. They established the credit foncier. There are others, but I take the conspicuous case. That institution has operated successfully since 1852. The Government never had to do anything except the first year, and to set up the machinery by which it did it as a nation.

I can give you an example of a farm that I inspected. They make a uniform loan to the farmer at 4½ per cent. They sell these securities, over 13,000,000 francs at a time, to the public, and they are all taken up at 3 per cent by the French people. The farmers themselves buy these securities. They issue bonds along the same system as the other; but the money is furnished by this stock company, the crédit foncier, the Government appointing the governor and having inpection of it and having its hand on it in order to protect the public who do business with it, because it was for the benefit of the nation. Now, they make the loans at 3 per cent—that is, they sell their securities at 3 per cent—they loan their money at 4½ per cent to the farmer. Now, I want to give you one example of that, because, as I say, gentlemen, this relates to the subject so closely that

it is indivisible, you can not separate it. I went to a farm 28 miles out of Paris, where a man had bought a farm. He had been educated in Paris—and there is no use sending people out on farms until they do know something about it. He went out there and bought; he had capital enough after he graduated from an agricultural institution to buy a farm 25 years ago; and he put into practice the knowledge he had gained in the school, and he borrowed the money from the crédit foncier to underdrain it and put it in order and to do up-to-date farming. He made an agreement to pay that loan—because this is the limit I speak of—to pay back his money at the end of 75 years. His rate was 4.40; but he paid each year 4.48; and the difference between 4.30 and 4.48 was the amortization of the loan; so that in 75 years, paying 4.48 per cent every year, his loan would be fully paid at the end of 75 years. That is one of the principles they apply for the amortization of loans. He had been 25 years on this land, therefore he had paid one-third of the loan. He was the king bee of that country. He could have paid off this loan at any time during these years, but he would have had to pay a penalty, and he chose not to do so; he had become rich for a farmer, and he bought the securities of other farmers and put them in his box. That is what the system accomplished. It took him three years to put his farm in order.

The CHAIRMAN. How many acres did he have?

Mr. HERRICK. He had a hundred acres. It was an old farm. Now, I just want to prophesy this: That because these principles have been applied successfully in all those countries we have got to do likewise before we can succeed in this.

Mr. HAWLEY. Do you advocate the Government taking up this matter the same way the French Government did?

Mr. HERRICK. I should like this Government to permit a general incorporation by the Government of the United States, if it is big enough to do this, and I believe that this should be done and could be done.

The CHAIRMAN. What would become of the State's prerogative then?

Mr. HERRICK. I do not know that that is feasible, Mr. Chairman. I would like to see that done, but I do not know whether we could do that. That is what I should like to see. That is why I explained the other system first, because I suppose the other is a feasible thing. But you can do this: You can pass this bill; you can encourage agriculture and do all these things, and then this is what is going to follow. It is bound to come. It is the necessary thing, and it is the one thing that is going to purify the source of all our social life and to rehabilitate our country and to maintain our balance and keep us where we belong—along the right line. There can not be any doubt about this to my mind at all, and I apologize for having said so much. [Applause.]

The CHAIRMAN. Governor, do not stop yet. We would like to know how it is that values in Ohio have depreciated, as you say, in the last 25 years. We can not understand that.

Mr. HERRICK. Well, that relates to most of our States; it relates to New York and all these States here practically. But I will give you one illustration, in a neighborhood near Cleveland, in Ashtabula County, Jefferson County, and different counties about there. When

I was a small boy that land was selling for $100 an acre. It was dairy land and farming land generally, but they have gone along farming it year by year. Their yields decreased until, when we took our averages here, the production is not enough to pay the farmer. The boys have found nothing in farm life to attract them, and the attention of our whole Nation has been directed to other things. Farming has been neglected—that question was gone over yesterday, so I will not go into it.

The CHAIRMAN. Do you recall one of the speeches the other night, wherein it was stated that Illinois land was worth $200 an acre?

Mr. HERRICK. Yes.

The CHAIRMAN. And I suggested that they sell and come down to Virginia, where they could buy as good land for $50 an acre?

Mr. HERRICK. Yes; but I do not think Illinois land is increasing in value. I think they are going back instead of forward. I think that as to the State I can make that statement without fear of contradiction—that there is deterioration—because in all these States it is doing so. Of course, the soil in Illinois is newer, and it takes a long time for soil like that of Illinois to wear out.

Mr. HAWLEY. Without commenting on the chairman's State, I have a constituent who refused to accept $2,000 an acre for his land.

Mr. HERRICK. Where?

Mr. HAWLEY. In Oregon.

Mr. HERRICK. Well, that is a new State. We have started and we have gone over this country, and we have used up the soil. There are farms in Germany and France that have been farmed for 800 years, and they are producing twice as much as the farms in our country. They have brought back their soil, they have renewed their soil, and they have done what we ought to do. We take out of the land and put nothing back, but when we inaugurate this system of France, just as intelligent people should do in anything they are engaged in, then we keep our lands valuable; but we let them run down, as they have in most of the States—that is really the trouble.

The CHAIRMAN. Under more liberal banking laws our farmers borrow from their local banks money to operate their farms?

Mr. HERRICK. Yes; they would get along very well. That is all right, and there are certain regions of this country where there is no difficulty, but they pay a good stiff rate for it. You can borrow money to finance municipalities; but you can not borrow money on farms from our banks for 10 or 15 years. You have got to depend upon the whim of the local bank. It is like a railroad or municipality; you have got to have a long time and you have got to have a low rate of interest. Suppose you wanted to build a railroad from here to New York, and there were none in existence, you could talk all day about the advantages of it, but unless you could issue a bond running for a long period of years, who would go into the enterprise unless they had the money to put into it and to carry the whole thing through? It is a long time at a low rate; that is the whole thing.

Mr. WICKLIFFE. These bonds in Germany to which you refer bear about the same rate of interest as municipal bonds in Germany?

Mr. HERRICK. Just about the same.

Mr. WICKLIFFE. In your State what does the farmer pay on an ordinary mortgage?

Mr. HERRICK. The farmer pays in our State, while the bonds will sell at 4, 4½, and 5 per cent, bonds of a municipality, and even less than 4 per cent, because we have made them nontaxable—and these bonds on farms ought to be made nontaxable—while those municipal bonds will sell at that rate, if the farmer wants to borrow any money in Ohio to-day—I am speaking of the rule, not the exception—he will pay not less than 6 per cent or 7 per cent; he will pay 2 or 5 per cent commission; he will only borrow for three or five years; and at the end of that time he does not know whether he will get it renewed or not, and if he renews he will have to pay another commission.

Mr. WICKLIFFE. What rate of interest do the municipal bonds pay?

Mr. HERRICK. A fraction over 4 per cent.

Mr. WICKLIFFE. And they sell better in the market than these mortgages?

Mr. HERRICK. The farmers can not get the money. Mr. Forgan, who is one of the best bankers in the country and knows more about the philosophy of his business than most of them, said to me, "I hope that this can be accomplished." He said, "We have practically to keep a man to answer the flood of applications from the great West and Southwest. We can not loan on these farms; we have no means of doing it." That is true generally throughout the country. Some one will say in Minnesota, "We are all right; we do not need it, because we loan the farmers money; we have got plenty." True, they do; but they loan for one, two, or three years or four months or six months. It is the long time and the low rate of interest that is wanted. That is the meat of the point.

Another thing. When we take our statistics—let us take it on the potato. In Germany they raise 226 bushels to the acre and last year produced a crop that was worth twelve or thirteen hundred million dollars. We raised a crop worth $200,000,000, and 80 bushels to the acre. It is all those statistics that these questions of finance relate to. If we are going to produce what our soil will produce, we have got to do not only what these gentlemen are talking about, but we have got to do this financing in connection with it. It is a part of it—just as much as it is of building railroads or factories or municipal enterprises. And I want to get you to think of it along that line, because it is a part of it and is so regarded in every civilized country.

The CHAIRMAN. Now, Governor, you will soon be in Paris, and I congratulate you, because between now and next December you can give us more concrete illustrations.

Mr. HERRICK. I am going to put a man that I am going to pay myself to work on this thing in France, because all that we have got to do—we have not got to create something, as they did in Europe. We have simply got to apply a sound economic principle that has been eminently successful in every country that has tried it in order to inaugurate this thing, and it will restore our agriculture to its proper position.

The CHAIRMAN. You have put us on a new line of thought, so to speak, this morning, and it will take a little time for this committee to digest all this, and we are short of funds just now. In December we will be in better condition to digest all your information. The committee is much obliged to you.

Mr. HAWLEY. When a change occurs in the money market in Germany do the bonds of the land organizations fluctuate more than the bonds of the municipal organizations?

Mr. HERRICK. Well, they are about the same thing; they are certain fixed investments running a long time. Now that I am speaking of it—you will notice that I advertise my bank occasionally—we have thirty-two millions invested in bonds; I have been engaged in the matter of purchasing bonds. There are times when the municipal-bond market and railway-bond market will vary from time to time a little. But the note market, the discounts for moving crops, the local markets, and all that sort of thing, that, of course, changes sharply. During the recent German crisis we loaned millions of dollars for 30 days; we could get 7 per cent by depositing the money in the Deutsche Bank of New York. The rate advanced sharply; the bankers paid 7 per cent. I don't know what the manufacturers paid. Meanwhile, these securities were selling as low as 4½ per cent. It is the best security—the farm.

Mr. WICKLIFFE. Governor, I would like to ask you if this is not true with reference to difference in resources, in comparing this country with European countries? There they have utilized and put in cultivation, and have had in cultivation for centuries, all the land that it was possible to cultivate, whereas in this country there are millions of acres yet that could be cultivated that is virgin soil; that has never yet been touched?

Mr. HERRICK. Yes.

Mr. WICKLIFFE. So that it is not as much a crying necessity with us as it is with them, for the reason that we have not utilized our virgin soil?

Mr. HERRICK. I would say this in answer to that; you can accomplish a good deal and you can go along by educating the people; but I mean that you can not go as fast as we ought to. Here is the point: At any time in the last 10 or 25 years this situation that we have to-day in America of high prices has obtained and does obtain now because the consumption is outrunning our production in this country. That is the point. And our attention has gone away from the farm. Now, when we get it back—you can apply this to one of your virgin soil farms just as well as if you wanted to put in intensified farming; if you have just broken the sod and need some money, it takes two or three years before you can get anything out of it. Now, if you can borrow from one of these institutions for a long time at a low rate, that means cheaper production.

Mr. WICKLIFFE. Well, I differ from you with reference to the farmer getting the benefit of these high prices. It is the high price of selling that makes prices high. For instance, in the city of New York in 1909 the consumer paid $60,000,000 for his potatoes; and yet the producer of those potatoes only received $6,000,000.

Mr. HERRICK. Well, here is the society that intervenes to help out that situation; that is another branch of it and should come along with this also.

Mr. WICKLIFFE. We really need, however, on that score, advice as to how to sell, how to market farm products, do we not, some way to do away with the middleman?

Mr. HERRICK. They have accomplished that by these societies in these different States of reaching the consumer and buying from the manufacturer and delivering to the consumer and then selling——

Mr. WICKLIFFE. I noticed your statement about that a while ago, and was very much interested.

Mr. HERRICK. I did not want to take the time of the committee to go into that.

The CHAIRMAN. That is an incidental question.

Mr. HAUGEN. Mr. Chairman, in connection with this high cost of living, I want to call attention to the fact that when potatoes were selling in Washington at $1.35 a bushel a gentleman from Minnesota appeared before this committee and stated that potatoes were then selling there for 10 cents a bushel, and that he would be glad to make this committee a present of a carload of potatoes if they would take them out of his cellar and pay for shipment.

Mr. HERRICK. Did they do it?

Mr. HAUGEN. There was nobody here who cared to accept the offer.

Mr. HERRICK. I shall be glad to answer any questions.

Mr. HEFLIN. To go back to that farm proposition: Suppose a farmer desired to borrow money on a section of land, would he make a mortgage directly to the company?

Mr. HERRICK. If it was the crédit-foncier scheme he would, and woud get his money at 4½ per cent. If it was a German mortgage he would state the rate he wanted to pay, and then, when securities were issued at that rate, he would get his money on it.

Mr. HEFLIN. Then the mortgage would be the basis for the issue of the bonds?

Mr. HERRICK. Precisely.

Mr. HEFLIN. And when the bond was issued the bond company would be behind the bond?

Mr. HERRICK. The society would guarantee the payment of interest and principal of that bond, would pay it when due, and they would, like a tax collector, collect the money from the farmer. Now, there is just one point I want to explain. When a man wants to pay off his mortgage there is a bond out on it. The law provides that that may be paid off and another be put in in place of it of the same value.

The CHAIRMAN. That is, the bond is transferred to other property?

Mr. HERRICK. Yes, sir; that is the point.

Mr. CANDLER. These two questions, as you suggest, are close together. In my State—Mississippi—in my district is located the agricultural college, in which we have a thousand boys to-day.

Mr. HERRICK. Yes.

Mr. CANDLER. Then the State authorizes each county to issue bonds for the purpose of establishing an agricultural school, called the county agricultural high school.

Mr. HERRICK. Yes; that is a good plan.

Mr. CANDLER. And in various parts of the State these have been established; there is one in my own county and one in the adjoining county. Then, in addition to that, they have given the counties, or the subdivisions of the counties, authority to issue bonds for the public land of that county or that subdivision.

Mr. HERRICK. Yes.

Mr. CANDLER. Like the municipalities. For instance, our counties are divided into five supervisors' districts. One supervisor's district can issue bonds for the purpose of building good roads, and things of that kind, just like a municipality. Then we have authority to organize drainage districts, and a number of farmers organize together on this drainage proposition and organize a company.

Mr. HERRICK. Now, that drainage proposition is about the same thing.

Mr. CANDLER. On that basis they issue bonds. As you say, they get long-time bonds.

Mr. HAUGEN. With a low rate of interest?

Mr. CANDLER. It happens to the extent that we get experts to come down from the Department of Agriculture, and they made the original surveys, profiles, and estimates for this drainage district, and it is in course of construction now. Bonds are issued on that subdivision of the county which is included, and on these lands where the owners are willing to sign petitions and go into this scheme. Now, then, we secured loans on these bonds, I think, at 5 per cent.

Mr. HERRICK. Yes.

Mr. CANDLER. And there was no difficulty in the world.

Mr. HERRICK. Not a bit; and the man can go ahead and have his land improved.

Mr. CANDLER. Well, now, then, that illustrates what you said a moment ago.

Mr. HERRICK. That is the best illustration we have had.

Mr. CANDLER. And the bonds are issued at low rate?

Mr. HERRICK. I want to make just one statement, because it is before you gentlemen in Congress now. You are proposing to do for the Philippines what I am suggesting now. I went over to the War Department, and they requested me—Gen. Edwards did—to look at their plan of land banks, as they call them there, in the Philippines. Now, that is practically a copy of the crédit-foncier system that you are establishing in the Philippines. Now, while you are doing it in the Philippines do it for your own country. [Applause.]

Mr. THOMPSON. I would like, now that we have heard from the professors and the commercial interests, to present a farmer, the master of the National Grange, Mr. Oliver Wilson.

STATEMENT OF MR. OLIVER WILSON, OF PEORIA, ILL.

Mr. WILSON. Mr. Chairman and gentlemen, I was asked to speak, I think, merely for a few minutes to indicate the position that the organized farmers of the United States, or, in other words, the members of the National Grange, have taken on this educational problem. I do not expect to go into the details on this bill. In fact, I am not very familiar with this particular bill, but I want to say to this committee that the National Grange, composed of a large membership scattered over between 30 and 40 States of this Union, is unanimous for an extension fund for this kind of education. There was a resolution presented at the last session of the National Grange along the line that this bill covers, and it was voted unanimously to urge it before Congress. We have here this morning the gentleman who introduced that resolution in the National Grange, in the person of Prof. Patterson, director of the Maryland Agricultural College, and the representative of the Maryland State Grange. We have also here the dean for many years of the West Virginia College of Agriculture, Prof. Atkeson, who is also master of the State Grange of West Virginia and a member of the legislative committee of the National Grange. Now, I propose to ask you gentlemen to hear first

from Prof. Atkeson; and I want to give my time to Prof. Patterson, director of the Maryland College. I thank you.

Mr. BEALL. Just a minute, please. You speak of this resolution being adopted by the National Grange. How much time was given to the consideration of it? To what extent was it considered by the organization?

Mr. WILSON. I did not say this bill.

Mr. BEALL. I am not attempting, you understand, to reflect upon the indorsement; but my experience and observation has been that in many conventions very frequently resolutions can be introduced and carried through on the spur of the moment and no very serious consideration is given to them. It would give a great deal more force to the indorsement to know that it had been very carefully considered by the organization.

Mr. WILSON. This resolution was considered by the committee, and it was fairly well considered by the body; but I would say this, that the National Grange has stood for so long for agricultural education that it did not require very much debate or discussion, because our people are a unit on any measure that will bring about a better condition of education throughout the rural districts.

Mr. BEALL. Naturally so. But were there any resolutions introduced by the farmers belonging to the National Grange, aside from this resolution that was introduced by representatives of an agricultural college?

Mr. WILSON. This representative of an agricultural college, we call him a farmer just as well.

Mr. BEALL. Well, that is good. So that was the only resolution that any delegate to your convention introduced on the subject?

Mr. WILSON. Well, I am not sure as to that. There were others along educational lines, but probably that was the only one on this one specific extension, of course. I might ask either one of these gentlemen whether I am correct in that?

Mr. BEALL. Of course that has been up for a number of years, and I did not know whether the members of your organization were really interested or not. If they were, perhaps there were many resolutions introduced and referred to a committee.

Mr. WILSON. Not necessarily. Generally on these questions that have been before the public——

Mr. THOMPSON. May I interrupt? I desire to say that at the last meeting of the National Grange this resolution was under discussion, and was there adopted as a result of that discussion. I am clear as to that, because I had something to do with adopting the resolution.

Mr. LEVER. What is the membership of your order at the present time?

Mr. WILSON. I can not answer that offhand. It is supposed to be between 700,000 and 1,000,000 people.

Mr. LEVER. Probably nearly a million people.

Mr. HAWLEY. Are those just the heads of families?

Mr. WILSON. No; they are members of families.

Mr. HAWLEY. Heads and members of families?

Mr. WILSON. Yes.

Mr. WICKLIFFE. What States does your organization cover, Mr. Wilson?

Mr. WILSON. Do you want me to name them?

Mr. WICKLIFFE. Yes.

Mr. WILSON. I might fail. I guess I had better name those that are not covered.

Mr. WICKLIFFE. Well, yes; we would like to know about the extent of the organization.

Mr. WILSON. This takes in all of the Central West; all of the Eastern and New England States. North Dakota is not organized.

Mr. WICKLIFFE. Do you go to the Pacific coast?

Mr. WILSON. Well, yes; all the Pacific Slope States.

Mr. HANNA. Is that by reason of the fact that the Society of Equity is so strong in North Dakota?

Mr. WILSON. Well, I can not answer that. We have not undertaken it yet. There is work going on there now. Utah and Wyoming are not organized, and the Carolinas, Florida, Mississippi—and Alabama, probably. I am not quite sure whether Alabama has a few.

Mr. MAGUIRE. Is Nebraska organized?

Mr. WILSON. Nebraska is not thoroughly organized; but it maintains a State organization. Montana is being organized at the present time. While Montana as yet does not maintain a State organization, the organization work is going on. There are some granges in Tennessee. The Southern States are not strong. The Eastern, Central, and some of the Middle Western States are very strong.

Mr. HAUGEN. I understood you to say that your organization stands for education, but not directly for this bill?

Mr. WILSON. This bill has not been considered by the organization—that is, the present bill.

Mr. HAUGEN. I think it is fair to assume that this committee and all who appear before it stand for education. They have given evidence as to that, inasmuch as they have passed double the appropriation for education and for the department in the last 10 years, and there are now appropriations amounting in the aggregate to $22,000,000.

Mr. WILSON. The Grange will stand for any fair bill for the advancement of this extension work.

Mr. HAUGEN. Yes.

Mr. THOMPSON. I would like to introduce Prof. Adkeson. He is a member of the legislative committee of the National Grange.

The CHAIRMAN. The committee will be glad to hear Prof. Adkeson.

STATEMENT OF PROF. T. C. ADKESON.

Prof. ADKESON. Mr. Chairman and gentlemen of the committee, appearing before this committee in behalf of this particular bill is rather an unexpected opportunity, and I do not know that I could have a more desirable thing from my standpoint than an opportunity to appear before this committee in behalf of this bill, or any other bill that proposes aid to the distribution of agricultural information among the people on the farm, the real farm. By way of explanation, perhaps, in order that what I say may have its full relation to the matter—and while I have been introduced as a pro-

fessor and have been referred to as that for 14 or 15 years, being dean of our State college of agriculture, I think it is only fair to say that I was 40 years old before anybody ever called me a professor; and that I had fought the battle of life up to that time as a West Virginia farmer with my own hands, and I had labored as a laborer for five years after I was married, at the magnificent sum of 75 cents a day; and then I undertook to buy a farm, and at one time I paid taxes on a good many thousands of dollars of my debts under the West Virginia law; we paid taxes on the full value of the land, though it was incumbered to its full value by mortgages.

Now, a good deal has been said in very recent months and years in advocacy of the return to the farms of the country of many of the people in the congested centers of population, ordinarily referred to as the "back to the farm" movement. I have studied that problem, I think, in all its relations from inside my farm fences; and for the last 15 or 20 years from my relation to the agricultural college and the farms of my State and of the country; and I find this: That in the cities, in the centers of congested population, in a broad way there are just two classes of people—those that are fairly well to do or exceedingly well to do and those that are day laborers and are poor. The men in the cities that are able to go back to the country and buy farms could not be induced to go back there, as a general proposition. The man that ought to go back to the farm would only exchange his daily wage in the city and on the public works for the daily wage in the country, and, as a rule, he prefers to put up with the ills he has rather than flee to those that he knows nothing about, and that his experience has told him were undesirable—a farm laborer on the average farm of the country. So we regard the whole idea of "back to the farm" for the people who are in the cities or have gone to the cities as of very little use to anybody. The basic proposition involved in this whole agricultural problem, as it has been discussed since I have been in the room and as I have heard it discussed before numerous congressional committees on other subjects, is to make country conditions more desirable and more profitable, so that the younger men and the older men, in some instances, that are already in the country will be less inclined to flee from the conditions of the country to the better conditions, as they conceive, that exist in the city.

Mr. SIMMONS. Is that not the greatest problem that confronts the country?

Prof. ADKESON. That is the greatest.

Mr. SIMMONS. The difficulty of getting farm labor, farm help?

Prof. ADKESON. That is one difficulty; you can not induce laborers of any class to go to the country.

Mr. SIMMONS. Do you think it is due to the fact that the conditions of the country are not as attractive as the glittering lights and fine pavements of the city?

Prof. ADKESON. If the committee will bear with me about three minutes, I will relate a circumstance that throws light on this proposition. I was out in Des Moines two years ago, when a banquet was given by the Prairie Club to the Right Hon. Sir Horace Plunkett, member of the British Parliament; and for a long while after-dinner speeches were made, and toward daylight in the morning there had been 30 or 40 people delivering addresses, and every single one of

those men eulogized the beauty of the country and told us about the dewy strawberries, the rich cream, and the singing birds, and all the things that go to make up the language of the romanticist and the poet; and about 3 o'clock in the morning one of the gentlemen who knew that I had had some practical farming experience wanted to hear from me; and I called attention to those beautiful speeches that we had been listening to, and I wanted to know what all those people were doing in Des Moines; and that question has not been answered yet, and it won't be answered next week or next year. I do not know how many of the members of this committee were reared in the country, but I will venture to say that no overwhelming majority of them are out behind the plow now.

Mr. HANNA. Some of them, perhaps, are under the hammer.

SEVERAL MEMBERS. All of us are farmers.

Prof. ADKESON. Well, I am glad to know that is the fact; but I am a little skeptical. Well, to follow the thought I had in mind. All that I have said was preliminary to the general proposition, which involves directly this bill, or similar legislation. Now, it has been said that I am a member of the National Grange legislative committee. I am also and have been for 16 years master of the grange in West Virginia, and naturally I have given some attention to these subjects; and it happened in the last session of the National Grange that I was chairman of the committee on agriculture that considered these very problems, and there was but one resolution introduced, as I remember, and that resolution indorsed what is known as the Page bill. Most of you are more or less intimately acquainted with its provisions; it is a somewhat broader measure than the present so-called Lever bill, in part covering all that the Lever bill covers and a good deal more. Now, the National Grange committee on education considered carefully the Page bill. It considered this problem of agricultural extension in its broadest sense, without any particular reference to any bill, and unanimously, as Mr. Wilson has said, indorsed the idea of agricultural extension. Now, then, if agricultural extension has any merit upon which Congress could base its action in making appropriations for agricultural extension it is involved in the Lever bill, in the Page bill, or in any other bill that would carry the knowledge that the experiment stations and the colleges of agriculture have developed to the people and make the actual farmer, the man in the country, more efficient and capable of feeding more people, producing larger crops, and instantly meeting the present high cost of living—or cost of high living, if you choose to put it in that way. It is a long distance between the man in the country on the farm who is producing crops to support his own family and a surplus to support the congested population indicated in other industries; it is a long distance between him and graduation at an agricultural college. That distance is at least eight years of time for the young man between the public schools and agricultural college graduation. The cost is at least $3,000.

Just within the last week I looked over a publication of Cornell University, where they had sent to their students—I do not exactly remember the number, but I think it was about a thousand—certain inquiries, and they had replies from between seven and eight hundred; I do not remember these figures exactly, and it is not necessary to illustrate the point. Well, now, that gave the various occupations

relating to agriculture, fruit growing, truck growing, and the various agricultural interests classified; across the top of this table was the designation of the different classes, and of the number of men who replied there were, as I remember it now, 41 Ph. D. graduates; that is, men who had reached the doctor's degree in the agricultural college. Not a single one of those men were engaged in work having any relation to agriculture, except in the Government service and State services and colleges and experiment stations. Then, there were the masters of science from the Cornell College of Agriculture, about 80, as I remember it now. Not a single one of those men had any relation to practical agriculture—I mean growing crops when I speak of agriculture. Then there were the regular baccalaureate graduates, a hundred and some, as I remember. Now, there were just 30, as I remember, of that number that this table indicated were on the home farms, and those alone were engaged in any department of practical agriculture. When it reached those who had been with the college one or two years, and the short-course people, and the winter-term students, they ran up into the hundreds, and a large majority, I think, of those people were actual farmers, and they had gone to the college for a few weeks or a few months, or a year or two. But as to the graduates, there were these 30 that were on the home farms. Now, I had been so interested in just the questions asked that I had taken the steps to get the names of those 30 men, and I proposed to put to them a tentative proposition to know if they would accept a position in some educational institution or the Government service at a salary of $1,200 a year; and I will bet a quarter that it will take more than half of them.

Mr. LEVER. Now, in that connection, does not your investigation and the results of it argue very strongly for this kind of legislation?

Prof. ADKESON. That is the point I am trying to make. Now, these people—the colleges can not supply enough men scientifically trained for these amounts of time—eight years covering the high-school course and the college course, at a considerable expense running into the thousands of dollars—and send very many of those people out to produce crops; but those men are the salt of the whole proposition. They are the men that are doing things that are worth doing. They spend months and years discovering a single fact. They might not know the difference between a cow and a horse—a man engaged in pure science; in chemistry, for instance—and yet they may discover something of incalculable value to the people, but if it does not reach the man on the farm—and it never will reach the man on the farm to any great extent under present conditions—it is of no value. But these groups of men are engaged in these various State departments, in our national Department of Agriculture, in the experiment stations, and in the colleges, and the demand for men scientifically trained to fill that kind of places is largely in excess of the supply of properly equipped men.

So those men are not going out to plow. But the things that they have learned need to be carried out to the farmers of the country and made accessible to them by demonstration work and extension work, through the running of special trains—agricultural trains, we call them—and schools in the country where you can bring together 30 or 40 or 50 farmers, men who have no ambition to do anything else, the young men and the middle-aged men and the older men. If we can not carry to the farmers themselves this information and

bridge this space between the scientific discoveries and the colleges and the stations and departments of agriculture, on the one hand, and the actual farmer on the other—and that can only be done, in my judgment, by some such scheme as is proposed in any of these bills now pending, either the Page bill or the Lever bill or any other similar bill—then the information is of no value to the man on the farm.

The CHAIRMAN. There are 16 of these bills.

Prof. ADKESON. Now, it was not my thought to occupy so much time. I have given the subject no special investigation, but I shall be glad to answer any questions.

The CHAIRMAN. Gentlemen, I am sorry to inform you that this committee expects to be on the floor of the House, and we have to be on the watch all the while to see that we have not stayed here too long.

Mr. LEVER. One minute, please. Mr. Hanna has a gentleman here, Mr. Chairman, I think.

Mr. HANNA. Mr. Chairman, I have a gentleman here from my own State, Mr. Wesley C. McDowell, who is both a banker and a farmer, being chairman of the executive council of the North Dakota Bankers' Association, and he would like to make a brief statement and to submit some further remarks for the record. It will take only a few moments.

The CHAIRMAN. We will hear him three or four minutes.

STATEMENT OF MR. WESLEY C. M'DOWELL.

Mr. Chairman and gentlemen of the committee, it affords me a great pleasure to be present at this time before your committee to add a word of testimony on the question before you for consideration on behalf of North Dakota. North Dakota is a new State. Practically none of our rich lands have been farmed over 25 or 30 years, and I think I may safely say that at least one-half of the State has only been developed during the last 10 years. You know out in North Dakota we have no forests, or coal mines, or manufacturing industries to speak of. Practically all we have is our soil. That is the State's asset, and its preservation and the retention of its fertility is our greatest aim. You people in the East know our State for its large wheat crops, and that grain has been the chief crop ever since any lands of our State have been cultivated. The men who settled North Dakota, generally speaking, had very little funds to commence their farming operations. In early days they broke up the land and let it lay over a season before planting the first crop of wheat. In later years they began to sow flax on the sod immediately after breaking.

Wheat and flax, together with oats and barley, have formed the principal crops that have been grown in the past by our Dakota farmers. Whether it is scientifically correct or not I am not going to say, but the fact is that constant sowing and constant planting of wheat on the same land has caused the crop to deteriorate in yield, so that in a large section of the State, where the land has been farmed for 15 or 20 years, we need pretty fair conditions to produce a good crop. It seems reasonable to suppose that the wheat crop continually taking the same elements out of the soil would eventually exhaust it. Our farmers are a progressive class of men, and this condition of impoverishing the soil being brought home to them quite forcibly

the last two or three years in particular has only begun to turn their attention to better methods of agriculture.

One of the big things that our State has produced this last year has been its crop of corn. In the year 1911 North Dakota had over 450,000 acres in corn, and I am sure that I am giving you a conservative estimate when I say that in 1911 North Dakota produced not less than 10,000,000 bushels of corn. I have here a sample which I brought along to show you the kind of corn that we raise. You, perhaps, will not consider it as good as some of the corn raised in Illinois or Indiana, and perhaps some of you gentlemen from the Southern States can beat it, but to the North Dakota man it has proven a joy and a blessing. It means to us the possibility of cattle, hogs, and all kinds of stock; it means a greater future for our land. It means a rotation of crops; it means more acres of pasture land; in short, it means a diversification on our farms, so that we will have more things to realize on than we have had in the past.

The farming problem in North Dakota is a different problem than you have in the Eastern States and in the Southland. Our farms are large, the average farm in our State being nearly 400 acres, and the handling of these large farms must necessarily be done on a different scale than where men have only 40 and 80 acre tracts, as is common in the older countries. We have in our State about 75,000 farms and between fifteen and twenty million acres of cultivated lands at this time. Our population is about 577,000, and is almost wholly rural. These figures give you some idea of the large scale on which our farming is operated. In 1900 it was estimated that our farm lands were worth $11.15 an acre on an average over the State, while in 1910 they had increased to $25.71 per acre, which shows the development of the State. Now, there is no question in the minds of our people that he more mixed farming is carried on in the State the more things we can cultivate and produce with profit, the faster our land values will increase, and the more permanent will become the settlement of our land and more wealth produced. Our State has done a great deal for itself in this matter.

Our people take kindly to suggestions and seek in every way to help themselves. Let me illustrate in three or four ways in which we have taken hold of this matter in North Dakota. In the first place, our legislature has provided by law for the teaching of agriculture, of manual training, and domestic science, and the other subjects that are kindred thereto in all our public schools. We have a law which provides for the establishment of agricultural high schools and the farming of 5 or 10 acres of land in connection therewith. The State offers an inducement to all our rural schools that will take up these subjects by giving them State aid, from $50 to $150 per year, providing they hire good teachers, keep school long terms, and teach those subjects which are of interest to the development of an agricultural community. Our normal schools instruct in these branches, so that the teachers who go out therefrom are qualified to teach agriculture as well as the ordinary branches taught in all public schools. In this way it is hoped to better equip our boys and girls for the taking care of the land of the State and to better equip them to make farming productive.

Our agricultural college, which is one of the best in the United States, and in which we have some of the brightest men engaged in

agricultural work in the country, has done a great work. In early days the agricultural college was not appreciated as much as it should have been, for the reason that the people were not acquainted with the work that it was doing nor with the aid and help that it might be to them if they were brought in touch with its work. I remember distinctly when they used to run special trains over our State bringing people in to see the fields and plats and hear lectures on different subjects, the railroads furnishing the trains free of charge for the purpose. They sent out bulletins all over the State, probably not read as much as they should have been, but still serving a good purpose. They organized farmers' institutes, with which no doubt you are all familiar; later they took up and are doing at present a more comprehensive extension work. This extension work, in my mind, has had a whole lot to do with the development of corn culture in the State of North Dakota. In the year 1911, 11,000 school children were members of corn clubs or engaged in corn tests all over our State. Thirty-seven counties of our State participated in these corn tests. It is estimated that the acreage of corn has been increased seven or eight times on account of the interest that the school children have shown in this matter, and I might state it better still when I say on account of the success that the school children have had in raising this crop. This same extension work has gone a step further, and in the last year, through the college, have been conducted what might be termed "farm schools," where demonstrations are made in actual practice, showing by concrete examples how to test milk, how to build silos, how to test seed, how to lay out farm buildings, and plant groves, etc.

One of the largest movements, however, which has been inaugurated in our State was started about four or five months ago and is done privately, being known under the name of the Better Farming Association of the State of North Dakota. This association was started by business people of Minneapolis, Minn., which city, by the way, is one of our chief market places and one from which we buy a large part of our goods, together with business people of the State of North Dakota, having for its object just what its name signifies. Minneapolis men, together with the railroads that traverse our State, raised something like $40,000 a year, and have agreed to pay this sum for a period of three years providing that the people of North Dakota will raise a like amount. This means the expenditure of a lot of money, but a lot of money is required to carry to the door of the operators of 75,000 farms the scientific knowledge of farming. A superintendent or secretary, as he is called, has been employed to supervise the work. The idea is to put a farm demonstrator in every county that can make the necessary arrangements for the work. This county demonstrator will travel around the county like a county superintendent of schools, visiting with the farmers, taking to them what information he can, making suggestions as it seems best, looking toward improved conditions on the farms. He might, for instance, suggest in one place a particular way to rotate crops on a certain piece of land to get the best results, or how to lay out a set of farm buildings the most economically, or the best grade of stock to develop, and in a hundred different ways be of assistance to the farmer.

Just let me illustrate one thing that is being carried out on one of the large farms at Marion, where I live: On this farm eggs are

put up in boxes, a dozen in a box, and on a card in the box is written the date on which the eggs were collected; the name of the farm appears on the outside of the box. These eggs sell readily for 10 or 15 cents per dozen more than those collected in the ordinary way. The idea of putting these eggs up in this manner, making them more marketable, is the idea which a demonstrator might convey to other farms all over our State, and just that would mean a great amount of money to the State if carried out. This is only one of many ideas that occur to you as well as to me.

It is not necessary for me to go into detail in this matter inasmuch as all you gentlemen who are from the South are entirely familiar with demonstration work. We in North Dakota believe thoroughly in the idea. We want to keep all the good things that we have at this time; we want to get just as much from our own legislature as we can, and I feel certain that the State of North Dakota will do its part. We approve the Lever bill, which is under discussion at this time. We understand that it is the purpose of this bill to carry out this demonstration work along with the extension work that is now conducted by our agricultural colleges. It is a start in the right direction, and for that reason it has our approval. We are particularly anxious to secure Government aid now. We are young. Conservation of our soil will mean millions, both to North Dakota and the Nation. There appears to be a spirit of economy in regard to new legislation which calls for appropriations in this Congress, but I want to say to you gentlemen from the East that your showing an interest in the condition of western farm lands and the improvement of agricultural conditions throughout the West, the making of its farmers' life more desirable, will do a great deal toward drawing your section of the country and ours closer together. There is a feeling out in the West that you often legislate a great deal for the trusts and manufacturing industries as against our interests, and by giving us some support along this line you have a great opportunity to show to the western farmer that his interests are identical with those of his eastern brother.

I wish to thank you for your kind attention this morning, and I know that you will give us the best that you have.

Mr. THOMPSON. Mr. Chairman and gentlemen of the committee, I suppose the director of the experiment station in Maryland would be glad to have five minutes; and if you can not hear him now, we will produce him another day; but we would like to have him speak now. We understand, of course, the pressure due to the necessity of being on the floor at 12 o'clock.

Mr. LEVER. I think, gentlemen, we can hear him for five minutes.

STATEMENT OF MR. H. J. PATTERSON.

Mr. PATTERSON. Congress in its wisdom has provided for agricultural investigations, and we have been accumulating information at these stations for nearly 25 years. We have got a large constituency of readers and people who adopt the results of this work through reading; but I do not believe it will take any argument to convince members of this committee that most farmers will not adopt things by reading of them. They must see them; and one of the most important features of this extension work is the demonstration side of it; and I believe, before we are going to make a very great impress upon the agriculture of this country, we have got to dis-

tribute the results of our research work out among the farmers, where the masses of them can see it and see that it is adapted to their particular conditions and location. Now, I am satisfied that in Maryland, if our investigations on the corn crop—we grow about 600,000 acres annually—were put in practice we could raise the average yield at least 2 barrels per acre—that is 10 bushels, for the information of the western man—and that would mean at present prices over $3,000,000 more annually to our farmers.

We have been conducting demonstration work in our State through the cow-testing associations. These show to the farmer on his own farm that half of the cows are a good deal more profitable than the other half, and in every herd there was a large percentage of cows that were unprofitable. Now, we talked that to him for 15 years before we commenced to practice it and demonstrate it to him in his own herd, and it was only after demonstration that he would commence to weed out the unprofitable cows. Now, you can take the history of agriculture in Europe, and there was a time when their average yield of wheat was about the same as it is in this country and the same as it is in my own State—14 bushels; and in England it has been raised until now it is 33 bushels, and in the other countries of Europe it has been raised up to from 28 to 32 bushels; and they have done this by bringing the results and bringing demonstrators before their people; and if we are to raise our yield up to that average, or up to a profitable yield, I am satisfied that we have got to do it through demonstrations. We can go through all of the crops in the State and make a like impress upon them by having the results that we have accumulated put into practice. What we can do in our State can be done in every State of the Union; and I believe that if the National Government is to reap rewards from the money that they have expended in the last 25 years for agricultural investigations, it is very necessary that we take this step toward providing, on a national basis, for agricultural extension and agricultural demonstrations, so that the farmers will put these results into practice in an effective way. I thank you for your attention.

Mr. LEVER. We have Mr. Thompson still with us, gentlemen, and we will listen to his closing speech to-morrow at 10 o'clock in the morning; also we can then hear Dean Russell.

Thereupon, at 12 o'clock noon, the committee adjourned until Saturday, March 2, 1912, at 10 o'clock a. m.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, D. C., March 2, 1912.

The committee met at 10 o'clock a. m., Hon. John Lamb (chairman) presiding.

The CHAIRMAN. The committee will come to order. Dean Russell, will you give the stenographer your name and title?

STATEMENT OF DR. H. L. RUSSELL, DEAN OF THE COLLEGE OF AGRICULTURE OF THE UNIVERSITY OF WISCONSIN.

Mr. RUSSELL. I am dean of the college of agriculture of the University of Wisconsin; also member of the executive committee of the Association of Agricultural Colleges and Experiment Stations.

I do not think gentlemen, that I need to take your time to go into general propositions at all, but I had thought possibly a few illustrations of the efficiency of the demonstrative method as against the method which has heretofore obtained in the dissemination of agricultural information might not be amiss.

The Government has given funds for the development of agricultural teaching and agricultural research. In our research fund we have the Hatch and Adams fund. We are prohibited by law, by the interpretation of the Federal Department of Agriculture, from using any of those funds for the carrying on of what may be called extension work. Now, why do we need this extension work? Why are not the lines of work as represented by teaching and research sufficient?

There is to-day, gentlemen, you know as well as I, enough information that has been found out which, if it was applied by the man who needs the application on the farm, to absolutely revolutionize our agricultural conditions. That information has been worked out in the various experimental stations and in the agricultural colleges and by scientific bodies, but it is not utilized to-day because the man on the soil does not know of its existence to that degree which enables him to put these things into operation. Here is your dynamo creating energy—that is, producing this information; here is the motor over here on the farm that needs that living force to put it into operation, to make it work that much better; but by itself nothing is accomplished, because of the lack of that connecting wire. Now, the extension movement is the connecting wire which connects the work of research and the finding out of how to do these things with the man on the farm who has got to do those things. The experiment stations have for years been trying to disseminate that information through the medium of bulletins, and I can perhaps use no better illustration than my own personal experience to show you the efficacy of what you might call the paper-bullet method as against the personal demonstrative method. You know in Wisconsin the dairy interests predominate. We have got the disease of bovine tuberculosis, which is a serious menace to our live stock. We realized years ago, when the tuberculin test came out, that in that little method we had the means to eradicate this disease if only we could get the farmers to apply it. We had worked over this question in the experiment station, and I had prepared the very best possible literature on this subject I could possibly put together. As a result, we were getting substantially about 1,000 tests a year on cattle among the farmers testing their herds to find out whether they had tuberculosis.

Now, gentlemen, we have got over 2,000,000 cattle in Wisconsin; more that that, 1,500,000 dairy cattle and over 1,000,000 of meat cattle, and to test on that basis would have simply taken us practically a thousand years. We were making no headway at all. It seemed to me, therefore, we had got to devise some other method of getting at this proposition, and I conceived this idea of holding a public post mortem demonstration. We would go into a man's herd and test that herd; we would find that 15 to 25 per cent of those animals reacted; we would say to that man, we will kill two or three of your animals right before your eyes so you can see we have made this condemnation on the basis of tuberculin test; you pick out the animals you want. Generally speaking, they would take the fattest

and best conditioned animals and say, if that animal has got tuberculosis we will lay down and say there is something in it. We would kill those animals right before their eyes, bring the farmers together to witness the test, and in that way we started this system of public post mortem demonstration. Before we started this, as I say, we had this bulletin canvass going on. The very first year we got 9,000 tests, the next year 25,000, the next year over 50,000, the next year 100,000, and last year over 200,000 dairy cattle were tested in Wisconsin voluntarily by the farmers because they saw it was their economic salvation to take hold of this matter themselves.

Mr. McLAUGHLIN. Would a question interfere with you?

Mr. RUSSELL. Not a bit.

Mr. McLAUGHLIN. You may remember that measures of this kind have been before our committee before, and that there was strenuous opposition to them by certain members of the committee and prominent Members of the House. I understand this was the reason of this opposition. I do not speak of it as agreeing with it, because I did not; but it ought to be answered, and I thought perhaps you could answer it as well as anyone. The opposition was strong because all these investigations having been made, all this scientific knowledge having been acquired, the matter of applying it, making practical use of it in the States and by the people of the States was merely a question of the use of money, and when it comes to that it was claimed it was up to the people of the States themselves to raise the money and not to call upon the General Government for it.

Mr. RUSSELL. I will show you in regard to that how the matter has worked out in Wisconsin, as an illustration. Now, the efficacy of attacking the problem in comparison with the other method is illustrated by a case at hand, to answer your argument, sir, in regard to that.

Mr. McLAUGHLIN. I beg pardon; it is not my argument.

Mr. RUSSELL. The argument you bring forward.

Mr. McLAUGHLIN. I combated it as well as I could, but unsuccessfully.

Mr. RUSSELL. To answer that argument, let me say we can not use one dollar of the Adams money for this kind of work. We recognized the absolute necessity of organizing this kind of work in the State of Wisconsin, and I went to the board of regents and said, "Gentlemen, give me $2,000 to start this work." They said, "You can not get anything with $2,000," and I said, "I do not care about the amount, give me 20 cents, but recognize the principle of organizing the extension work and I will take my chances with the legislature." We got the $2,000. The next year they gave us an opportunity to go to the legislature. We got $30,000 from the legislature, and the next biennial session we got $40,000, which we now have.

You may say this work should be done by the States. It is being done by a number of the States, but, gentlemen, this is a national problem, not a State problem. There are a large number of the States in which this movement has not yet received the momentum it has in a few of the States. Those States do not recognize, the people themselves do not recognize, the importance of it, and all this time they are suffering from the lack of the development of a system which is just as applicable to their conditions as it is to Wisconsin. This problem, therefore, has got to be nationalized,

it has got to be dignified by having the Federal Government take hold of this aspect of the problem just the same as it took hold of the problem of research and teaching.

When you complete the circuit of Federal support for agricultural teaching, and agricultural research, and now agricultural extension, you have completed the entire circuit; and one of those lines of work is just as important as another, and, so far as actual immediate returns are concerned, to my mind, gentlemen, there is no question but that this agricultural extension work is of more importance to the Nation at large than either that of research or teaching. I am talking now about immediate returns, because we know, those of us who are in this work, that we can give back to the country at large a greater interest on the investment that is being put into this line of work than any other expenditure that possibly can be made.

Mr. MAGUIRE. I would like to ask, along that same line, just what is the limitation of the use of those two funds?

Mr. RUSSELL. The Adams money was given for the prosecution of fundamental research in agriculture, and we are debarred by the United States Department of Agriculture from using 1 cent of that money for anything of a demonstrative or extension character.

Mr. MAGUIRE. You do some of that extension work?

Mr. RUSSELL. With State funds.

Mr. MAGUIRE. Wholly out of State funds?

Mr. RUSSELL. Wholly out of State funds. We get altogether in the State of Wisconsin $54,000 from the two Morrill Acts, from the Adams and Hatch and from the Nelson Acts, and that money must be spent absolutely—and we have got to account for every dollar of it—for teaching and research. We can not use $1 of that money for demonstrative work. We are spending, in addition to that, about $40,000, we get from the State, and between $20,000 and $25,000 more, which we get from the university treasury, which, of course, also comes from the State, for exactly this line of work. So far as we in Wisconsin are concerned, we do not need this support from the Federal Government, but I plead for half or two-thirds of the States in which this work has not yet even been started. During all this time what is happening? Our crops and yields are running down, depleting the fertility of our soil for the lack of this kind of information.

The question of soil fertility is a question that comes right down to a basis of dollars and cents. I want to give you just one point which came to my notice through Dr. Hopkins, of Illinois. You all know Dr. Hopkins, being one of the most prominent soil experts in this country. The question of the fertility of our soils is a question of diagnosis. That is just as important to our economic problems as to our health problem. A physician, if he is not first a diagnostician, he is not worth a whip. If anything is the matter with you, you want to find out first what is the matter, and then it is a comparatively easy matter to apply the recognized modes of treatment. We have to-day that same problem in reference to the soil.

How is the practical farmer, living on a 40 or 80 acre farm, to know what is the matter with his farm when the yields are declining? He can not make a soil analysis. He can not even make an acidity

test to determine whether his soil is acid or not until shown how, so you have got to have a soil doctor as much as a human doctor. We do it in our laboratories by encouraging farmers to send in a barrel of the soil, and that is divided into pots, and we apply different treatments—potash, nitrogen, and so on—to find in what elements the soil is lacking. It would cost us $50 to make a chemical analysis, but this pot method can be done at a comparatively small cost, so if a man sends in a sample of soil in the fall we can answer by growing a crop on it before spring what is the deficiency in that soil. We are finding cases where hundreds of thousands of acres of land lack one element—lack phosphorus. They have been cropped and recropped so long that the phosphorus element is depleted to a point where profitable crops can no longer be secured.

I want to give one incident which occurred in Dr. Hopkins's experience in Illinois. They started these soil-demonstration fields all over Illinois. They put one of these down in what is called Egypt, in southern Illinois, in that region where to-day the average production of corn is less than 15 bushels to the acre. They went to work and analyzed that soil and found it had been depleted in phosphorus. That soil had been robbed of its phosphorus content through its continuous cropping until reduced to yields, year in and out—not a bad year, but on average years—so low that it was barely possible for a man to support his family on what he got off of it. They went to work and put on one of these experimental fields a moderate quantity of phosphorus, which was applied to restore in part this phosphorus content, of which the soil had been robbed. You can not grow plants without phosphorus any more than you can live without air.

The CHAIRMAN. Did you discover this lack of phosphorus without chemical analysis?

Mr. RUSSELL. No; this is where the experiment station came in and made that analysis. They could have made that same discovery by making these pot tests I speak of, but in this particular case a full chemical examination was made of the soil, because they wanted the exact knowledge of that condition before they established the experimental field in that particular locality.

What happened the first year? They put this experiment field into this district, and grew 50 bushels of corn to the acre, while men right around them were growing 13 bushels. This is what happened: One man came up to this demonstration meeting with tears in his eyes and said to Dr. Hopkins, "If only a man had come along here and told me this story 40 years ago, what a difference it would have made to me and my family." He said he had been living in that community 40 years and all the time the fertility of his land had gone down until he had depleted that fertility to the extent that he was barely able to keep body and breeches together. He said, "I would like to have sent my children to the high school. I have got a boy who could have gone to the university—he has got brains enough to have succeeded there—but I tell you, gentlemen, I did not have enough money so I could give my children an education. I could have grown a corn crop of 50 bushels just as well as you have grown it if I had only known what to do. That fact comes now to me so late in life that my children are past that stage that I can give them the advantages they could have had."

Now, I tell you gentlemen that is a personal proposition when it comes down to this that human life is being held down and cramped by lack of fundamental knowledge. Why, you may say, Why under the sun did he not know it? Here were bulletins that told this story, and he could have read this in the agricultural papers. But, gentlemen, these bulletins make no impression on that kind of a fellow. He is so near the ragged edge of existence that he has not got time, energy, or interest enough to take an agricultural paper. It is these poor fellows that need help, and it seems to me there is no higher function of the Government than to see to it that this information is brought to him in such a way that he is convinced and brought to the point to where he puts these things in operation. Now, it cost $1.50 per acre to do that thing, and the increased returns were from 13 bushels—the average of that community—up to 50 bushels per acre in one year's time. That is a sample of what is possible and what is being done by the demonstrative method.

We are doing the same thing in Wisconsin. We have thousands of acres of land that are clover sick. Now, the farmers say, I can not grow clover because my land is clover sick, and he thinks that some occult hidden disease is the cause of all this trouble, whereas, as a matter of fact, it is nothing but the deficiency of lime in the soil. Those lands have been cropped to the point where the natural lime content has gone down and they have become sour, and the legumes, especially alfalfa and clover, which are sensitive to an acid soil, are unable to thrive and develop. All you have got to do in the world to neutralize that soil acidity is to add a little ground limestone or marl to make that land pass from clover-sick land to a soil where you get a good crop of clover. We see that with our eyes every day on our county demonstration farms; we have 26 where we are carrying on this work.

The CHAIRMAN. Let me say, and I know you are well acquainted with the fact, Edwin Ruffin, of Virginia, formulated that idea 50 years ago, and the farmers all over Virginia limed their lands that were clover sick, and the result was the finest crops of clover you ever saw in your life, and that was when I was a boy.

Mr. RUSSELL. Why are we not doing it all over the United States? Simply because the farmers have not seen those fields. The only reason your farmers did it around that man was because they saw he was getting results.

Now, as I say, on these county poor farms we take and put the land in clover and lime a part and leave the rest unlimed. We inoculate one section and leave uninoculated another section, and then in the summer time we bring hundreds of farmers to see the actual fields. At the Dodge County meeting last fall we had 2,500 farmers come in and spend the day in looking over these experimental plats on these farms. That clover stood this high, 2 feet, on the limed plots, and on the unlimed plots that high, 5 or 6 inches. Those fellows did not have to be hit in the head more than once by that demonstration in order to convince them to go and do likewise. That ground limestone costs from 80 cents to $2 a ton. It can be applied to the ground at the rate of, say, 300 to 500 pounds to the acre, a mere bagatelle of expense, and the difference in the crops will be from one-half to two-thirds a ton of clover to the acre and 3, 4, to 5 tons of alfalfa. Is it not worth while?

I tell you, gentlemen, there is not anything that can be done that will have the influence on increasing the values in this country in the matter of production like the dissemination of this kind of information. Now, we are pushing that work in Wisconsin in the dissemination of pure-bred seed grains through the medium of an experimental association which is composed of 1,600 young men, graduates of the agricultural college. Those men, by the way, have gone back to the farm. From our short course of agriculture 90 per cent are in agriculture to-day, and 80 per cent right back on Wisconsin farms. Sixteen hundred of those young men are engaged in this dissemination work with our pure-bred seed grains—barley, corn, and oats. What has been the average yield of corn in the United States? Twenty-five bushels to the acre. In Wisconsin it is 37 bushels to the acre. We are not in the corn belt; we are away north of the corn belt, but we have produced, through acclimatization and adaptation and selection, types of corn that will give us one ear to the stalk and give us 10 to 15 tons of forage for our dairy cattle per acre. These 1,600 boys average 50 bushels to the acre. Those are the actual results. On our own experimental farm our average runs 65 bushels, and on our breeding plat it runs 95 to 100 bushels per acre.

The CHAIRMAN. If every State would do what you are doing, this question would be solved.

Mr. RUSSELL. That is it, and if you get this thing once talked up in the minds of the people, and the way to wake them up is to help support the States in the development of this work. You have given, for instance, for this work, for teaching and research, you have given Federal aid without asking the States to put $1 into it, and what is the result? With that stimulus which has been given by the National Government the States are contributing more and more money for these lines of work. In Wisconsin, for instance, we are spending $10 for every dollar we get from the National Government now, and that is growing—that proportion is growing right along—but it has been developed because we have had the initial stimulus, and I think that the wisest provision of this whole proposition is in place of the National Government saying to the States, we will give you this money outright and not expect you to contribute $1, is this principle you have put into this bill that for every dollar Uncle Sam gives the State must lay down another dollar beside it. That is going to stimulate more than you can imagine the States to take hold of this work and develop it in a way which is going to result in this increased production. It is true, possibly, that this may come in time, that the attitude of some few of the States that have gone ahead on this thing may spread to other States, and they may be induced to take up this problem purely from that State's point of view, but that result is going to come very much more rapidly if it is supported by the National Government than if it is left wholly to State control.

We had Federal experiment stations before the Hatch bill ever went into existence. There were a half dozen experiment stations founded by the States; but look what an impetus was given to this slow movement when the movement was nationalized by the formation of the Hatch Act. The amount of impetus given through this nationalization of the problem in this way put the whole movement on an entirely different basis from what it was when picked up

sporadically by three or four States. That same history is going to be repeated with reference to this extension work, and the value of it is that it is going to show a return immediately. We do not have to wait, as we do for the educational problem, for a "kid" to grow up to a man before we get returns out of it; we are going to get returns out of this extension work for the money put into it the very next year, and this movement that has been worked out is graduated so that the States are already able to take hold of this thing and develop it in a most active way without waiting to develop men to take charge of it.

The CHAIRMAN. Permit me this question, please, sir. If this scheme is put in operation and fully carried out in its purposes, would there be a necessity for so much money devoted to the Adams and Morrill Acts?

Mr. RUSSELL. I do not think we can consider at all that the problems with reference to agricultural research are solved. We have modes of conquering a number of diseases, but as many are baffling us with reference to our knowledge as to how to handle them as those that have been conquered. Take, for instance, the question of smuts and rusts in grains. We have absolutely no way of conquering them to-day with reference to wheat or with reference to corn. We know now how to conquer it with reference to barley and oats and have done much along those lines, but there are almost an infinite variety of pests for every plant we grow and we are losing to-day in America hundreds of millions of dollars from these insect and fungous pests.

Mr. RUBEY. We are going to relieve you of all that.

Mr. RUSSELL. In what way are you going to conquer it, Mr. Rubey?

Mr. RUBEY. We are going to prevent bringing it into the country.

Mr. RUSSELL. I beg pardon; we have got it already in here. Those pests over in Europe are a mighty good thing to keep out. If we had undertaken that years ago, we would not have the brown-tail and gypsy moth, but we have got those things right here in our midst to-day that are not conquered, and that is the function of the research money, for the Government to give money to the prosecution of original research, to the conquering of those maladies.

This demonstration work is an entirely different kind of work. This is taking facts that have already been worked out and successfully demonstrated and applying them to the man right on the ground who needs them. We do not propose to try any experiments with him; he is not to be any experiment station at all. The work at the experiment station ought to be confined to the problems that must be taken up that are yet unsolved, and, gentlemen, they are more numerous than the sands of the sea, and they are all the time increasing, because what, for instance, is a comparatively harmless pest to-day may, before our changes in agriculture, become a serious pest to-morrow, so that problem has never any ending.

Mr. HAWLEY. It has been suggested to me this, that this work should be done by the States, through State appropriations, the State making the appropriation and thus developing its own researches. It will increase the taxable values of property, and every year the State will get back as much, or more, into its State treasury and to the treasuries of localities that may contribute than is put into it, whereas the National Government would get back nothing.

Mr. RUSSELL. Why not?

Mr. HAWLEY. That has been suggested to me as an objection. I would like to hear you on that point.

Mr. RUSSELL. The National Government depends for its prosperity upon the prosperity of the whole country. Supposing one State did go to work and do this, as Wisconsin and Illinois have done, and the prosperity that came from this work was held within that quarter. What about the other 46 States? You have got to have some object lesson to get the fellows down in Virginia and South Carolina to do this kind of business. And you are spending to-day in Georgia and South Carolina hundreds of millions of dollars for chemical fertilizers now being misused. They are applying the same kind of chemical fertilizer and the same treatment to the uplands of Georgia as down on the seaboard, because they do not know any better. It is a problem that must be met and handled, and it has got to be handled in a local way. The speed with which this work can be accomplished is going to be intensified, if nationalized, by a thousandfold over what it would be if it is gradually filtered from one State to another.

Now, there are a dozen States where this movement has obtained some momentum. They are mostly Northern States, but people from the South know what this demonstration work has done. In the work which has already been done there it has given you a revival of agricultural interests that is one of the biggest things that has happened to your section, and, gentlemen, in my opinion, the next general agricultural advance is going to be in the new South. We in the North are looking to see more development in the Southern States in the next 10 years than has happened in the Canadian territory and in our Western States, and it is this inculcation of this kind of practical illustration to the fellow that is on the land that is going to put you people in the front rank of those States. It is simply a question as to the rate with which those results are to be attained, and it is going to be attained by a small Federal aid, supplemented by the States taking hold of it themselves.

You all know the work already carried on in the South. As stated, a good many of those States are already moving in this direction, but it is a question whether you can afford to let our resources lie idle during these years, when this ferment is slowly working through the mass of the body politic. It is an awfully hard thing to get farmers to help themselves, because they are so individualistic and so conservative in their modes of attack. They do as they see the people around them do, and what was good enough for their fathers they say is good enough for them. They state they are willing to do that, but they are not willing to take 3 cents a pound for pork and 50 cents a bushel for wheat and $12 for a dairy cow like their fathers did, and we can not live under the agricultural conditions our forefathers did. Why, gentlemen, the lines of production and consumption are rapidly approaching each other, and I tell you it is not going to be long before in this country we can not raise enough in America, right within our own borders, to feed our own people. That time is not very far distant, unless we increase our production.

I will not take any more of your time now, but shall be very glad to answer any questions you may have.

STATEMENT OF DR. W. O. THOMPSON, PRESIDENT OF OHIO STATE UNIVERSITY AND CHAIRMAN OF THE EXECUTIVE COMMITTEE OF THE ASSOCIATION OF AMERICAN AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

Mr. THOMPSON. It is my duty, I suppose, as chairman of the executive committee, to present a sort of résumé here of the discussion that has taken place, together with some particular evidence I may have at my disposal. In the first place, let me remind you this is not a new question; it has been before this Congress in other sessions and is one of the questions that will remain here until it is solved. There is not any question about that fact. The people of the country are not going to run away from this, and I believe that the Congress is not going to run away from it; at least some day soon you will be ready to see the necessity and the wisdom of this measure, as we believe.

Now, the Association of Agricultural Colleges, in session on November last, adopted this, among other things. This was the portion of the report from the committee on extension work which referred to Federal appropriations for extension work. I will read it and submit it as a part of the record.

The Association of American Agricultural Colleges and Experiment Stations, in session at Columbus, Ohio, November, 1911, adopted the following report from the committee on extension work:

SUPPLEMENTARY REPORT RELATIVE TO FEDERAL APPROPRIATIONS FOR EXTENSION WORK.

Your committee recommends the adoption of the following resolutions as expressive of the views of this association on the subject of Federal appropriations for extension work:

I. That we again emphatically indorse the plan of Federal appropriations for extension work in agriculture in the several States, including demonstration and field instruction.

II. That in view of the present remarkable growth of interest in this work, and the need of a nation-wide development of popular education in agriculture, we believe that congressional legislation granting aid to the States for this purpose is at the present of pressing importance for American agriculture, and the most approved method of reaching the masses of the people with the best ideals and practices of scientific agriculture.

III. That we reiterate our approval of a bill substantially embodying the principles of the bill indorsed by this association one year ago, and including the following provisions:

(1) An initial appropriation to each land-grant college for extension work in agriculture and rural life, irrespective of State appropriations for that purpose.

(2) Additional graduated appropriations, after a period of two years, to these land-grant colleges which have a definitely organized extension service, conditional on, at least, equal State appropriations for similar purposes, with such maximum as Congress may determine.

IV. That the executive committee be urged to use every legitimate means to secure the passage of such legislation at the coming session of Congress.

Now, it is in obedience to that series of resolutions passed by the association that this committee is before you urging upon you this kind of legislation.

Let me say that we are interested in the principle and not in the details of a bill; further than that these details shall carry such appropriations as would be deemed wise by Congress, and, second, that it shall do the thing, namely, provide for the demonstration work.

I would like to impress upon the committee the fact that we are to do the things we are told to do or authorized to do, and there is at present, as Dean Russell has so well stated, no authorization for this kind of work with Federal funds but a distinct prohibition. If I may read one or two sections from the statutes in Ohio authorizing this work it may throw a little light on this. We began with an initial appropriation of $40,000, after the college had been engaged in extension work for four or five years, without any authority of law, simply because we thought it was for the good of agriculture.

SECTION 1. That the college of agriculture and domestic science of the Ohio State University is hereby authorized and instructed to arrange for the extension of its teachings throughout the State, and shall arrange to hold schools in which instructions shall be given in soil fertility, stock raising, crop production, dairying, horticulture, domestic science, and kindred subjects.

SEC. 2. The said college, in addition to the holding of schools as provided in section 1 of this act shall give instruction and demonstrations in various lines of agriculture at agricultural fairs, institutes, granges, clubs, or in connection with any other organizations that, in the judgment of said college, may be useful in extending agricultural knowledge.

Any common carrier is authorized and empowered to carry the persons employed by and the equipment and exhibits used in such instruction and demonstrations free or at reduced rates.

Now, under that authority, in our effort to spend $50,000 annually we are proceeding without our schools in the winter season when demonstration is not possible, and in the summer season when schools are not possible we are proceeding with the demonstration plan. Next week we close our teaching and the week following begin our demonstration in the orchards of the State and go about through the State, the first thing with demonstration as to orchards, then a little later as to soil demonstrations. So we suit our activities to the climate, to the crop, and to the conditions. We are attempting, therefore, to go into every county in the State, and this year we held 78 distinct schools in 88 counties, so we pretty nearly covered the State. This is the effort we have made, and I want to call your attention, to supplement what Dean Russell said, to this fact: This extension work has followed the line of every other effort of the Federal Government. Local communities here and there have taken up the idea and demonstrated its utility. When a thing has been demonstrated that it can be done, then they have gone to the State, and in some instances to the Federal Government, asking the Government to help to put this idea into practical effect. For example, the Michigan College of Agriculture was authorized before there was any Morrill Act, and that college had demonstrated to the State of Michigan, and to a less degree to the whole country, that scientific agriculture was a practical thing. Based upon the experience we have had and the demonstration of its utility, the Congress was asked to make it Nation wide, and it responded. It should be here said that while there was considerable opposition to that bill from Minnesota, from Kansas, and from the South, that since that bill has been put into operation it is the most universally accepted piece of legislation that has ever been enacted in this country, the Constitution of the United States not excepted.

After we had done that thing, we discovered our shortage; that is, when we started our college of agriculture we did not have teachers, we did not have trained men, and we did not have a body of

knowledge. We did have chemists, physicists, and the Latin and 40 other things, and we had developed a few experiment stations—one in Connecticut. These experiment stations had shown that we could do certain things, and upon the basis of that proved and demonstrated ability we came to Congress and asked for the Hatch Act. Well, that was objected to, but it was discussed and discussed, and debated, and finally enacted; and that again has been so well established in its utility that it was supplemented and its revenues doubled.

That is exactly what happened with extension work. This is not a newborn idea this year. These colleges, in their efforts to disseminate their information, found themselves absolutely limited to a small area, and they began to say, "If we could do something else we could make our work more effective"; so in a few States and in a few localities the extension work was tried out and demonstrated to be a useful thing, and the concrete instances have been before this committee in these hearings, and many more could be cited. Now, having demonstrated the utility of this movement, we are asking that it be made nation wide as a logical supplement; having investigated the situation, having a body of men to teach it, now it is to carry the gospel of a better agriculture to the homes of all the people.

There are just two kinds of people in this world—one who knows what he wants and goes after it, and those are the best stock raisers, the best farmers, the best orchardists, the best fruit raisers, the best people in any community. They have gone around to the farmers' institutes, to the experimental stations, to the colleges of agriculture, and to the conventions; have found out and have gone back and put their knowledge in practice. They are the men who are coming now and asking you to do it for the other fellow. The other class is the man who has needs and does not know them. His needs have not crystallized so that he knows his wants; and the progressive people, if I may use that much maligned term here—the progressive manufacturers, the progressive farmers, the progressive business men—are the men in the lead, and they are the men who, just as our physicians are crying for better sanitary conditions, are crying for better agricultural conditions. Now, the farmers who are asking for this are the farmers who can get along without it, but they are asking for it because they are only one man or two men in a township.

For example, about three weeks ago to-morrow a young man stepped into my house and said, "Doctor, I apologize for coming to see you on Sunday afternoon, but I am on my way through the city." I said, "Very good." He proceeded to say this: "I was down here and took a short course in dairying six or seven years ago. When I went back home there was not a pure-bred bull in our township. I was laughed at for putting money in a pure-bred bull. My father had been in the dairy business all his life. There are now 20 or 25 in our township, and we have a good business, but I have just discovered I have got to get at the chemistry of the dairy business in order to do it as it ought to be done, and I have come to you for advice now as to whether I can come down to the college of agriculture and get a training in chemistry that will enable me to manage my own business."

There was an illustration of the fellow who knew his needs and wanted something, and he is the man who will insist that the more of this you can do the better for his township and his country. So I want the committee to understand fully that this appeal is an appeal for the inert mass of agriculture, not an appeal for the active, aggressive portion of it, for they, like all active men, will usually take care of themselves, you see. Now, the facts are, gentlemen, when you look at that situation, that every State, practically every county in this great Republic of ours, has got progressive men in it, but they have also got a lot of men who are living just on the verge of sustenance, who are not doing anything in the way of accumulating a surplus. Now, we shall never have a great provision in this country until we bring up the rear ranks, and so we are making an appeal now for the rear ranks of this great body of farmers. In making this appeal do not understand me to reflect upon them—not in the least, gentlemen. My sympathies are with them to the very limit, as I think yours ought to be. Many of those men were born and reared in that condition and do not know and can not know any different.

The CHAIRMAN. I think our sympathies are with them just as much as are yours.

Mr. THOMPSON. Oh, yes; I haven't any doubt of your sympathies. Now, the question is, the means of reaching it. Take the situation in my own State, for example, where we have got land that is little worth. My grandfather came from the north of Ireland and settled in Guernsey County in 1813, and reared a family of children on that farm, and to-day the farm can be bought for $20 an acre. I went to see it with my daughter to show her where her great-grandfather had settled, and the place has on it now some people. I talked with the people living on the place, and they would be glad to get away if they knew how, but I said to them, "My dear friends, this was once a productive farm and under right conditions could be made so again. It is as beautiful a part of the State as you need to have, but the fertility is not there." Now, that poor fellow does not know anything about the better conditions of agriculture, and if you should step into his house and see what he has you would discover his condition. I am not blaming him any more than you would, but the question is whether the interest of the State and Nation is not bound up in the permanent fertility and productivity of that portion of the country. Can we afford to neglect it? That is the issue.

This method, you see, is a method that can reach the grown-up farmer. In Ohio, for example, we have made the teaching of agriculture compulsory in every city school of that State and in every high school outside of the cities. So we are going to teach it in all these schools; how much I do not know, but we are going to make the effort. Now, those children will be 5 or 10 years coming up. For 10 years we have had a boys' club in Ohio trying to improve conditions on their own farms with their fathers, and we propose to keep up that energy, but we have not touched the State of Ohio yet; we have merely hinted to the State that something can be done. What we need is to take this father, who is 30 years of age and has 30 years more to live in all human probability, and reach him with this class of instruction. This last winter we had 250 of those young fellows—although I am bound to say some of them were older than the men in this com-

mittee room—we had them come up there for eight weeks and talked to them mornings and evenings about the fundamental principles of agriculture. But what are 250 farmers in a great State? Almost nothing; but they will be the messengers of improved agriculture wherever they go. Those men learned enough to start in their farming operations this spring on a new method. They are the men to redeem this present generation. You and I will be in our graves before the boys and girls being educated in elementary schools to-day come into their State as the active producing agency of this country; so if we are going to do anything for the betterment of agriculture in this generation it must be done with the men who are on the farms. So our proposition is to take this natural, logical step further and make effective the things already done by the cooperation with the States, and we want to put that emphasis there exactly, that we believe the States should do everything they can do.

In answer to what my friend Mr. McLaughlin suggested and my friend to the right here suggested, this bill does not propose to relieve the States of their duty nor relieve the States of their responsibility in the matter. It only proposes to give them a little stimulus to meet an opportunity. We would not take away from them their duty or their responsibility.

Now, on what ground can you justify the Federal Government coming in? Let me put it from my point of view, gentlemen. What is the Federal Government anyhow, and where does it get its money, and who pays its bills? From the people all over the country by indirect taxation you get your money. You go to the customs and take a little of it, and my friend here is smoking a cigar to the welfare of the Republic. On it a tax is paid, unconsciously to him. He is one of the ultimate consumers of that delightful narcotic for the benefit of the Republic. In other words, the people everywhere are doing this thing. Now, when you get that money collected whose is it? It belongs still to the people. That should not be overlooked. You are the agents to distribute that money in salaries for the President and the judiciary and Congress, and for a lot of other people who are serving us in one capacity or another, and so whatever we do with this money will be to the people's welfare.

The President of the United States has said the public-welfare clause may now well be brought in to the interest of agriculture, and I ask therefore that you take some of the people's money and apply it to the interest of the people in spreading abroad education on a fundamental industry. Some of you will do anything you can to protect the manufacturing establishment, and some of you will do anything you can to provide a revenue in a legitimate way. We are asking you now to protect the most fundamental industry we know, and to protect your own resources, because if the soil of this country can not be protected there will not be much left worth protecting a little later on. This is the doctrine of protection applied to the soil, which is God's endowment to the human race for its own welfare. So I do not care whether this man smokes his cigar for the benefit of the Republic or drinks a quart of whisky for the benefit of the Republic; I want the public to get the benefit, and that is the appeal.

The CHAIRMAN. You would not suggest, though, that he either smoke the cigar or drink the whisky?

Mr. THOMPSON. No, sir; I will let him offer the suggestion. He seems apparently able, so far as the cigar is concerned.

Mr. HANNA. If you wait until I drink the quart of whisky you will have to wait a long time.

Mr. MCLAUGHLIN. The Government can not do everything for the good of the people. It is not proper to use its money to buy a man's clothes or buy him an automobile. It is questionable whether it is proper to use its money for building local highways, and the question is raised about the advisability and propriety of the Government using the money to develop agriculture. Where do you draw the line? You are able, I believe, to tell us where the line is.

Mr. THOMPSON. That question was settled in 1862, gentlemen; do not forget that fact. This Morrill Act was passed under the Presidency of Mr. Buchanan and vetoed by Mr. Buchanan on the ground it was interference with the States. Mr. Buchanan was supported in that veto by men from Minnesota and men from Kansas, and, if my memory serves me correctly in this general region, I was going to say Mississippi. I have read every word the Congressional Record contains from the year 1856 to 1860, along clear through 1862. That matter was thoroughly debated in Congress, and when Mr. Buchanan vetoed that measure it was vetoed on that ground. It was afterwards passed again and signed by Mr. Lincoln, and we have got a popular referendum, if you want to put it that way, on that.

The CHAIRMAN. I was debating that question in another form at that time, too.

Mr. THOMPSON. Yes; we have settled that question now, and that decision stands, Capt. Lamb; that is the first proposition. It is a different question whether you can go into the secondary schools and furnish aid to the secondary education, but that question is before this Congress on another bill. That is a different thing and a new issue. But this is not a different issue—it is not a new issue—it is simply doing the very thing that has been approved once, twice, thrice, in the passing of the Morrill Act, the Hatch Act, and the amendment. So the question is not raised now, Mr. McLaughlin, and I should like this committee to understand that the people of this country have settled this issue once and for all.

Mr. WICKLIFFE. Will you mention the dates when those acts became laws?

Mr. THOMPSON. The Morrill Act in 1862, then the Hatch Act in 1887, the second Morrill Act in 1890, the Adams Act in 1906, and the Nelson amendment in 1907.

So that question has been before the people, and I do not object to your raising the question now; but I hope you will not object to my calling attention to the fact that on an issue settled, when settled at the forum of the American people, there is no use to call in a court or a legislature to debate it again; so we are not coming before this Congress with any new theory of Federal aid, but asking you simply to complete what you have done already by an approved, established method as tested out in a number of places on what might be termed, for convenience here, our private enterprises.

Now, let me say another thing about the matter of revenue. I do not propose to speak with accuracy, but we have a National Government here that has laid its hands on all inert and unconscious sources of revenue that can be imagined; for example, the revenues on to-

bacco, whisky, etc., unconscious revenues. I do not know where this coat came from that I wear; I do not know whether it is homemade or foreign made; I do not know what went into its cost, so I am not conscious what portion of the price of this coat was a tax. That is what I mean to say—it is an unconscious source of revenue. You do not undertake to ask when you buy a pound of tobacco or a box of cigars how much is the cost of material and how much is tax. We know there is only one thing in this country that can support a big tax. Whisky is worth anywhere from 10 to 20 cents a gallon; that is the cost of it, but it has been taxed 10 times its own value, and land taxed on that basis would be forsaken so rapidly we would never get near it. You have gotten the unconscious source of revenue in the hands of the Federal Government; the consequence is you can collect by one method or another hundreds of millions of dollars. You know the late Thomas Reed was criticized about the billion-dollar Congress, and he said, "Well, we have got a billion-dollar country." That was his only reply. That meant you collect about a thousand million dollars. I have not examined your appropriation bill, so I can not speak exactly as to what it will be this time.

Do you know that when the States in this Union put their heads together and count up how much they raise from all sources, they raise only about a third or a quarter as much money as the National Government? In other words, the Federal Government is three or four times as big as the aggregation of all the States put together, and the issue is coming just as sure as shooting that we have got to protect the States of this country against the aggressions of the Federal Government in the matter of revenue raising. What can we do more patriotic than say that a portion of these unconscious revenues shall be returned to the people along lines of established precedent and approved usage. You say, "Yes; we give so much for pensions, so much for battleships, so much for war—70 per cent of all our money is appropriated to purposes of war—less than 2 per cent for education. We say the great mass of people from whom you collect that revenue now expect you to help to stimulate and help a little in the care of and in preserving your own resources, for, as everybody knows, the farm I happen to own will not be owned many years by me. I do not own my grandfather's farm; it will go out of my possession, at least as soon as I go across the river, which may not be many years; but that farm is going to be here for thousands of years that are to come, and it is a part of this Nation's resources forever, on which I am paying taxes as long as I live.

Now, gentlemen, there are your resources to deal with, and this is a direct method of meeting this question and preserving these resources to these farmers, like me, who are trustees of God's property. We are asking you to look after these trustees enough to help the living men. We are not asking you to neglect their children; of course not. We are not asking you to neglect the serious problems of science; of course not. We are not asking you to tear down our navies and armies and protections; of course not. We are not asking you to fail to look after these other things; but we are simply saying the National Government is four times as able from a revenue point of view to do as the States are, in the aggregate, and yet what are we doing? We are giving 10 and 15 times as much money as the Federal Government is giving to-day in the cause of education. At

the very first dash out of the box we are asking the States to give as much as you are giving, and within five years that will mean the States will be giving five times as much as the Federal Government will be giving. Do not get it into your heads that you are going to relieve the people back here in the States of doing service. They will say, If this great country believes in the integrity of her resources, we on the ground ought to believe in it also, and I have been before legislatures in the States for 20 years, and I have got $50,000, for example, this year for agriculture in Ohio in a great deal shorter time than I am spending before this committee this morning. Indeed, I did not appear before the committee; I wrote them a note; that was all that was necessary. They saw the situation because one school in one county in Ohio had demonstrated the value of it, and I am asking you on the same line to do it. But I must not make a speech on the question.

I beg to say I have some resolutions here that I do not think I will use to burden your records. I have here, for example, a petition, or rather a statement, from North Dakota, of students assembled in the winter course, asking President Worth, of North Dakota, to present that matter as the voice of the people from that part of the country. I have here, as I have given you, the action of the Association of Agricultural Colleges. I have here the action of the three great grain and stock growing States of North and South Dakota and Minnesota. Their resolution indorses this principle, so I want to say this matter is a matter now in the minds of the people, and what have we done here when we come before this committee? Let us get it in our minds clearly. Here is an association of agricultural colleges which for 50 years has been studying problems of agriculture with more care than anywhere, unless it be in the Department of Agriculture. This extension bill has been debated four or five years in that association. We have previously had bills introduced in this Congress, and when it was up before the committee and Mr. Scott was chairman he raised the political issue just a little with me, and, being a brother Republican, I went after him in my Scotch-Irish outburst, and I said: "Mr. Scott, you can not make any more fatal mistake in the State of Kansas than neglecting the interests of agriculture."

The CHAIRMAN. You are not warning any of this committee, are you?

Mr. THOMPSON. No, sir; I am not warning you; you do not need it, gentlemen.

But these agricultural colleges have been studying this problem. They stand pretty close to the people of their States, and I tell you the teachers in these colleges of agriculture have nearly all of them got mud on their boots. They have come up out of the soil. We have not gone to the old type of college for men of that type to teach our boys agriculture. You could not get the president of the University of Ohio to recommend a city-bred man. These men have been living next to the soil and studying this problem very sincerely, very honestly. They have this thing on their hearts, and they believe in its efficacy. We have come to represent that sort of association. We have called your attention to what this association has done in past years, and how the American people have approved it. We are asking you now simply to take the last logical step, and the final step,

too, gentlemen, to bring agriculture to the American farm, and we are asking you to do it in the interest of the present; in the interest of our own national resources, and there is not any doctrine of conservation that is more vital and fundamental than the simple resources of the American farm. It is not therefore class legislation of any sort. This can not be a local question—can not by any means be made a local question. You may say cotton is a local issue in the South, but bless your souls it is becoming a mighty pressing issue in Ohio, where we are using more and more cotton every year, and the question of cost of production is bound up in the question of what we can do.

The man that circumscribes the cotton area of this world to-day circumscribes a large market of the future, and there is not a man on this committee who would vote more quickly for the protection and betterment of cotton fields to-day than the man who lives in Canada or northern America if he had an opportunity to vote on that question. The cotton question is not a local issue, so this question of better agriculture and better American resources is not a question of New England or California or Maine or Iowa, but is a question of the United States of America, for itself, and for the whole world about it; and, gentlemen, we appeal to your love of your country and your love of justice and your love of the American producer, in accordance with established statutes, in accordance with the established national policy, to do the thing that the people have approved and for which the people will applaud you before the 4th of July comes, because, as I firmly believe, you will pass this bill, and I do not think you will do anything in this session of Congress that will bring you more genuine gratitude or more lasting approbation from the people than to put into the statutes the simple provision here discussed.

We will leave it with you, gentlemen, without any discussion whatever, whether this be $100,000 a year or $100,000,000 a year—that is your proposition. Study it yourselves, and we leave you with the simple request that you put this in your heart and then put it on the statute book, and we vote you our sincere gratitude.

DIVISION OF MARKETS.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Monday, April 8, 1912.

The committee met at 11.45 o'clock a. m., Hon. John Lamb (chairman) presiding.

The CHAIRMAN. The committee is called for hearing two bills, No. 13568 and No. 16130. I believe Mr. Wickliffe desires to be heard on H. R. 13568, which was introduced by him.

[H. R. 16310, Sixty-second Congress, second session.]

IN THE HOUSE OF REPRESENTATIVES.

DECEMBER 19, 1911.—Mr. Beall of Texas introduced the following bill; which was referred to the Committee on Agriculture and ordered to be printed.

A BILL To establish in the Department of Agriculture a Bureau of Markets.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be in the Department of Agriculture a bureau to be known as the Bureau of Markets and a director who shall be the head of said bureau, to be appointed by the President, by and with the advice and consent of the Senate, and who shall receive a salary of five thousand dollars per annum. There shall also be in said bureau an assistant director, who shall receive a salary of three thousand dollars per annum, and who shall, in the absence of the director act as and perform the duties of the Director of the Bureau of Markets, and who shall also perform such other duties as may be assigned to him by the Secretary of Agriculture or by the said director of the bureau. There shall also be in said bureau a chief clerk, and such special agents, clerks, and other employees as may be authorized by law.

SEC. 2. That the said director shall have power and authority to make, under the direction of the Secretary of Agriculture, investigation as to the systems of marketing farm products, cooperative or otherwise, in practice in various sections of the United States and in foreign countries, and shall collect data in reference thereto. The information and data thus collected shall be diffused throughout the various agricultural sections of the country and made available for the use of any individual or organization, either by the circulation of printed bulletins or by information given personally by special agents of the Bureau of Markets. It shall also be the duty of the said Director of the Bureau of Markets to make, under the direction of the Secretary of Agriculture, investigation of demands for farm products in various trade centers and the current movement of such products, with the view of furnishing information as to the best available markets, which information shall be distributed under the direction of the Secretary of Agriculture.

SEC. 3. That it shall be the duty of the Director of Markets to compile and collect such information and statistics as may be valuable to enable the farmers to increase market facilities or adopt the best plans for obtaining the best possible price for their products, either by selling direct to consumers or otherwise. It shall be the duty of the Director of Markets, through the Secretary of Agriculture, to make an annual report to Congress, with any recommendations that may enable Congress to enact any additional necessary legislation.

SEC. 4. That the Secretary of Agriculture shall make all necessary arrangements for offices and supplies for use of said Bureau of Markets. The compensation of clerks and employees, not otherwise specifically provided for in this Act, shall be fixed by the Director of said Bureau of Markets, subject to approval by the Secretary of Agriculture.

[H. R. 13568, Sixty-second Congress, first session.]

IN THE HOUSE OF REPRESENTATIVES.

AUGUST 14, 1911.—Mr. Wickliffe introduced the following bill; which was referred to the Committee on Agriculture and ordered to be printed.

A BILL To establish in the Department of Agriculture a Bureau of Markets.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established in the Department of Agriculture a bureau to be called the Bureau of Markets, and a director of said bureau who shall be thoroughly equipped for the duties of said office by technical education and experience, and who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall receive a salary of six thousand dollars per annum; and there shall also be in the said bureau such experts and other employees as may from time to time be authorized by Congress.

SEC. 2. That it shall be the province and duty of said bureau and its director, under the direction of the Secretary of Agriculture, to make diligent investigation of the methods of marketing farm products, and especially with regard to finding out and recommending the fairest and most direct method by which farm products may reach the consumer from the producer, by accumulating and distributing information on the subject in question and on the subject of the best methods and best markets for selling; and said bureau shall from time to time make such public reports of its work as the said Secretary of said department may direct, with the recommendation of such bureau.

SEC. 3. That the Secretary of Agriculture shall provide the said bureau with furnished offices in the city of Washington, with such books, records, stationery, and appliances, and such assistants, clerks, stenographers, typewriters, and other employees as may be necessary for the proper discharge of the duties imposed by this act upon such bureau, fixing the compensation of such clerks and employees within appropriation made for that purpose.

SEC. 4. That this Act shall take effect from and after its passage.

STATEMENT OF HON. ROBERT C. WICKLIFFE, REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA.

MR. WICKLIFFE. Mr. Chairman and gentlemen of the committee, in appearing before you in behalf of the measure introduced by me on August 14, 1911, H. R. 13568, which measure has been referred to our committee, I wish to say at the outset that it is my opinion that is the function of the Agricultural Department of our Government to acquire and diffuse knowledge on the question of how to sell the products of the farmer, just as much as it is the duty of that department to acquire and disseminate knowledge concerning better methods of producing farm products.

It is one thing to raise farm products. It is another thing to sell farm products, and it is just as much the duty of the great Agricultural Department of the United States Government to assist in disseminating knowledge concerning the latter as the former.

We hear much to-day concerning the flocking to the cities of our rural population, and each recurring decennial census shows the trend to be toward the cities. Members of Congress have advanced many theories as to how to combat this centralization in the cities and the leaving of our farms. In my judgment one of the best ways to combat this evil tendency is by our Agricultural Department not only undertaking to instruct the farmer how to raise better crops, but also how to get a fair price for these crops when produced.

What boots it if the farmer raises the most magnificent crop of potatoes or onions or cabbage or beans, etc., ever recorded before in

our history if when he goes to sell these products the price he receives is not one-half of what the ultimate consumer in the end pays for them?

If the gentlemen of this committee will admit, as I think they will, that these premises are correct, I feel that the first question I should take up in presenting this matter is the question of whether or not a condition exists which requires action; and this being established, the next point I wish to discuss is what that action should be. I will therefore now discuss the condition that confronts us:

I will state that the first time my attention was particularly called to this question arose under conditions in my district incidental to the advent of the cotton-boll weevil. The production of cotton in the district which I represent went down as the result aforesaid, from 180,000 bales in 1904, to 10,000 bales in 1910. Our people were forced into other avenues of agriculture. They diversified in every direction; they raised a great deal of farm produce which comes under the practical heading of "truck farming." I found a great deal of complaint made by them, not that they could not grow these different kinds of products, but that when they grew them they could not get a fair return therefor, although they informed me that the final consumers in the city were paying practically twice the amount for their stuff that the farmer was receiving.

While they had a general idea and a general knowledge concerning the verity of this proposition, yet it was not until quite recently that I was able to obtain figures that would tend to show this discrepancy did exist so that same could be put in concrete form and furnish information of a definite character.

In July, 1910, I noticed in an article published by Mr. B. F. Yoakum, some figures on this subject that, were it not for the conservative source whence they came, might seem to be highly exaggerated. Among other things Mr. Yoakum states in the article referred to:

After a careful investigation it is estimated that during the past year (meaning 1909) the farmers received, and the consumers of the city of New York paid, for the following articles of food approximately the amounts respectively shown:

	Paid to farmer.	Paid by consumer.
Eggs	$17,238,000	$28,730,000
Cabbage	1,825,000	9,125,000
Onions	821,000	8,212,000
Milk	22,912,000	48,880,000
Potatoes	8,437,000	60,000,000

There are other articles mentioned, but I mention the above for brevity and because they are, as a rule, the products of the small farmer or truck grower, which is the class of farmer, which, in my opinion, is the most interested in this matter, as the discrepancy seems to be greater in his products than any others.

I admit that these figures are simply astounding, but coming from such an extremely conservative source as Mr. Yoakum, I feel that it can not be said that they have been given without careful study of this question. If this condition prevails with reference to the mar-

kets of the city of New York, I do not doubt that it prevails to more or less extent in each of the cities in our Union.

In the parish of Tangipahoa, in my district, our principal industry is truck growing. They are to-day shipping vegetables and berries to all parts of the Union, even shipping strawberries at this season as far west as Seattle, Wash., as far north at Chicago, and as far east as New York City. For years the best citizens of that parish have given thorough study, based on experience, to the marketing of farm products, and I have learned from both private conversation and by letter from such men as Samuel Hostetter, of Roseland; W. E. Hicks, of Ponchatoula, and others well qualified to speak, that this problem is one of the greatest that confronts the producer. In a recent letter to me, Mr. Hostetter states (after referring to an editorial in the Southern Agriculturist on the subject) among other things:

Will say we have too many leeches between the producers and consumers. I read statistics a few days ago that the farmers obtained six billion dollars in 1911 for all farm produce, but the consumer paid thirteen billion. I do not consider that a square deal.

And neither do I, and I do not believe that any member of this committee or any Member of Congress would so consider it. Later on I will quote others to show that Mr. Hostetter's figures are correct.

Mr. J. B. Martin, of Gonzales, La., manager of the Gonzales Truck Association, has also manifested much interest in the question of better markets, as well as numerous others in the district which I represent, until I am firmly convinced that not only my own district, but every rural district in the United States is interested in this question, for I believe that these conditions are general throughout the land.

Proceeding upon the theory, however, that information and definite figures are what this committee wants and not general allegations as to conditions, I wish to quote a few extracts from the address of Mr. Yoakum, delivered at a meeting of the Texas Farmers' Congress, at College, Tex., on July 26, 1911. I quote [reading]:

According to Government reports, the producer receives 46 cents for products of the farm for which the consumer pays $1. It is not encouraging to the young farmer boys to see that out of every dollar being paid for the products of the farm their share is only 46 cents, while the remaining 64 cents are distributed among others before these products reach the consumers' tables.

Last year's agricultural products were worth nine billion dollars to the farmers. The Government used farm values in getting figures for this total. Assuming that the farmers kept one-third of the products for their own use, the consumers paid over thirteen billion dollars for what the producers received six billion dollars. The cost of getting the year's products from producers to consumers amounted to the enormous sum of seven billion dollars. The real problem to deal with is not high cost of living. It is high cost of selling.

I feel that Mr. Yoakum has herein furnished a term, to wit: "The high cost of selling," which—as a matter of convenience and reference—will be very generally used hereafter by all discussing this question. Mr. Yoakum further says in that address [reading]:

The late S. A. Knapp, who had charge of farm-demonstration work in the Department of Agriculture, and who had more to do with the recent agricultural development in the South than any one man, used to say that one-eighth of successful farming required scientific knowledge, that three-eighths was an art, and the remainder was simply business. The business end of husbandry has been sadly neglected and that is the chief reason why agricultureal growth makes such a poor showing in comparison with other national development.

The farmers of this country, to receive better prices, do not have to experiment with untried theories. They only have to copy what others are doing successfully. For instance, the people of Denmark, 30 years ago, received twelve million dollars for their butter, eggs, and bacon. Then they began the organization of market societies. Now the same character of products brings in over 100 million dollars a year. Nearly all of their dairy products are marketed through cooperative creameries, and their egg-export societies have 25,000 members * * *.

The commercial waste in the distribution of farm products is reduced to a minimum. They share in the profits of economical marketing.

The necessity for early action is emphasized in the following paragraph, which I quote from the same address [reading]:

Advanced methods in handling the business of the farm are bound to come. What we must realize is the cost of delay. We have already waited too long. We should now work for prompt improvement in marketing facilities.

I now quote views of this gentleman as to the remedy [reading]:

The Government should assist in finding a way for better farm marketing. There should be a market bureau of the Agricultural Department devoted to accumulating and distributing information on best methods and best markets for selling * * *.

The Government should systematically trace the movement of all farm products to the place of final use and give the country the information. It should give the country the benefit of a thorough investigation of improved selling and marketing systems, including all means of distribution and handling. Results will be immediate. The farmer will reduce his selling cost when he learns in detail about wagon-haul costs, freight charges, cold storage charges, distribution in cities, profits to dealers, losses through deterioration, and all things which enter into marketing expense. As the selling expense decreases so will the returns to the farmer increase and the cost of living decrease.

Further on Mr. Yoakum says [reading]:

Nine billion dollars is a big lot of money. It is the one great item of our national resource. In connection with this great wealth-producing business, it is certainly conservative, figured from any standpoint, to say that on the nine billion dollar farm value crops the producers should receive two billion dollars more money than they are now receiving. These two billion dollars saved would mean to the farmers a two billion dollar saving on a nine billion dollar crop. When we discuss figures so large, they become mystifying.

These two billion dollars we could save, according to Mr. Yoakum, by a system of getting more direct from the farm to the consumer is more than the combined revenues of France, Italy, and Germany, and more than double the cost per year of running our own Government.

In an address delivered in the city of Washington last summer, the Secretary of Agriculture, among other things, said [reading]:

The price received by the farmer is one thing; the price paid by the consumer is far different. The distribution of farm products from the farm to consumers is elaborately organized, considerably involved and complicated, and burdened with costly features.

In this same address the Secretary of Agriculture further says [reading]:

The farmer does not get one-half the price the consumer pays. Therefore the great mass of farmers are not benefited by the rise in price in all goods and there is no benefit to the country at large. A few middlemen, selected individuals, who step between the farmer and consumer, are the persons who reap the benefit.

If my memory is correct the Secretary of Agriculture in his annual report to Congress in 1909 or 1910, gave the amount as 54 per

cent which disappears between the producer and ultimate consumer; that is to say, the difference in price which the producer receives and the ultimate consumer pays.

Of course, I am not for a moment contending that under the best methods of farm marketing or the marketing of farm products, that there must not be some considerable outlay for transportation, middlemen, etc., but what I do contend is that when so large an amount as 54 per cent, as contended by the Secretary of Agriculture (or even a greater amount than that, as contended by other authorities which I have quoted), that there must be of necessity something greatly out of joint in our method of marketing farm products. I am informed that in some countries abroad—Holland, for instance—only 25 per cent disappears between the producer and ultimate consumer, and I am of opinion that there is not a country on the globe where the difference is so vast as it is here in the United States.

I am not, in this argument, or the measure which I am pressing for the consideration of the committee, seeking to do an injustice to any calling whatsoever; I am simply seeking to do justice to all classes in this matter. Anything that would tend to bring the producer and ultimate consumer closer together would, in my judgment, be in the interest of both of said classes and would, at least, tend toward the following of the law of supply and demand in a legitimate way.

Transportation companies and retailers are both necessary factors in the distribution of farm products, and I think are recognized as such by all thinking men.

Having established the fact, as I believe I have, that there is entirely too great a difference in what the farmer receives for his products and what the ultimate consumer pays for same, I shall now pass to the next question, to wit, that of securing some remedy.

It might appear to some that a far-reaching investigation, either by this committee or some subcommittee of Congress, might get at the bottom of this matter and make such recommendations as to legislation which might solve the problem, but it is my judgment that it would be better to have some department of the executive branch of the Government make a special and specific study as to the best methods or marketing farm products and give the benefit of that information directly to the farmer.

If such division or bureau find that legislation is necessary they can report such findings to Congress with such recommendation as they deem best. If, on the other hand, they find, upon a full and complete study of the question, that certain methods of marketing, certain practices, with reference to getting the producer and ultimate consumer closer together are found to be feasible under existing law, and they can give that information direct to the farmer, both the farmer and ultimate consumer will be greatly benefited thereby.

With this end in view I introduced H. R. 13568, a bill to establish in the Department of Agriculture a bureau of markets. This measure provides that it shall be the province and duty of said bureau, under the direction of the Secretary of Agriculture, to make diligent investigations of the methods of marketing farm products, and especially with regard to finding out and recommending the fairest and most direct method by which farm products may reach the con-

sumer from the producer by accurately distributing information on the subject in question, and on the subject of the best methods and best markets for selling; and providing that said bureau shall from time to time make such public reports of its work as the said Secretary of the department may direct.

As to the details of the measure, they are matters that can be easily perfected by the committee, and I am not in any manner wedded to the specific wording of the bill. What I am after is to have a careful study made of this question by competent, honest, and industrious officials under the direction of the Department of Agriculture, devoting their time specifically to the subject matter.

With a view to remedying this unjust and unfair condition which undoubtedly exists, such a working force can in due time certainly work out a better method of marketing farm products than exists to-day. As to the avenue along which we should proceed with reference to solving this problem and as substantiating my views for the establishment of some bureau or division to specifically study this question, I will call attention of the committee to the report of the Committee on Agriculture of the United States Senate on April 3, 1912, which contains the following from letters from the Secretary of Agriculture [reading]:

My views are that a division of markets in our Bureau of Statistics, adequately equipped with funds and employees to properly handle the matters involved in the proposed legislation, would be of great benefit to the farmers of the country, enabling them to be advised frequently and regularly as to the various points to which their products could be shipped, thus avoiding congestion in certain markets and paucity of supplies in others, and that the probable cost of such a division would be much more than offset by the saving that would be affected to farmers through the aid that would be given them in the proper and economical marketing of agricultural commodities, particularly those of a perishable character.

Further on in the report the Secretary of Agriculture says [reading]:

The interests of the farmer are as greatly involved in the proper marketing of his surplus products as they are in other production. The two things—production and marketing—are intimately connected, and in that view it would be wise to place the proposed division in the Bureau of Statistics of the Department of Agriculture.

I therefore submit, Mr. Chairman, that a condition confronts us in the marketing of farm products which requires a remedy, and I further submit that from my investigation and study of this question, extending over a period of nearly two years, that the best avenues along which we can proceed is along the lines I have heretofore suggested.

The question that presents itself in this matter affects the welfare of the great mass of people in the uttermost parts of the country; it makes no difference whether it be one who dwells in the largest city of the land, or the former who lives in a most sparsely settled rural community, all would be better off if some method were shown along practical lines by means of which, he who actually produces a product may exchange that product most directly, with him who ultimately consumes it.

The consumers in our large cities would get their necessities of life at a cheaper price than they do now, and the producer of that

article would get a higher price than he receives now; because no political economist, in my judgment, would urge that a normal and fair condition exists where more than half of the price disappears between him who produces that article and him who ultimately consumes it.

If the farmer received, say, 10 per cent, 15 per cent, or 20 per cent more than he does to-day for his product, he could afford to see the price which exists to-day to the ultimate consumer materially lessened and still be better off than under present conditions.

The "high cost of selling" is certainly one of the greatest problems of the day, and we can not solve it by leaving present conditions alone and devoting all of our energies in this committee, and all the forces in the Department of Agriculture, solely and only to improve the methods of cultivation and production of products, when the fact stares us in the face that even when they are produced the farmer finds them blocked from a fair market.

The cry of "back to the farm" will continue to be the cry and will go unheeded unless something is done to secure to the farmer some way of solving "the high cost of selling."

Now, Mr. Chairman, I will be glad to answer any questions that the members of the committee would like to ask; but, before going further, I will state that we had expected to have Mr. Yoakum here to-day. He is very much interested in this matter, and the particular reason I wanted to have him appear before the committee was to find the basis for these very astounding figures. I wanted to find out, and I thought the committee would be interested in finding out how he got those figures and how accurate they were. Mr. Yoakum states, in his letter, that he will be unable to be here to-day, but I hope he can be here at some later date.

Now, I wish to say further in this matter that it has received some consideration by the United States Senate. The bill I introduced was on August 14, 1911. Since that time, Senator Smith of Georgia, to wit, on February 14, 1912, introduced a bill to establish in the Bureau of Statistics in the Department of Agriculture a Division of Markets (S. 5294); and that measure, I understand, has since been favorably reported by the Committee on Agriculture of the Senate to the Senate. I think, therefore, that in courtesy to Senator Smith, while the bill has not yet passed the Senate, we might, when we hold later hearings on this, invite him to be present and address us.

Mr. TALCOTT. When was this bill introduced?

Mr. WICKLIFFE. The bill of Senator Smith of Georgia?

Mr. TALCOTT. Yes.

Mr. WICKLIFFE. February 14, 1912.

Mr. TALCOTT. And that bill has been reported to the Senate?

Mr. WICKLIFFE. It has been reported favorably.

Mr. TALCOTT. Is it a long report?

Mr. WICKLIFFE. No. I have the report here, and will read it, if agreeable to the committee.

Mr. TALCOTT. Did they hold any extensive hearings in the Committee on Agriculture of the Senate?

Mr. WICKLIFFE. Not that I have heard of. I will ask you, Mr. Beall: Have you heard of any hearings?

Mr. BEALL. So far as I know, there have been no extended hearings.

Mr. WICKLIFFE. I notice that the Secretary of Agriculture, in his letter in regard to this matter, says that a chief of such a division, at $3,000 per annum, would be sufficient. Of course, I will only too gladly accept his suggestion for a chief at $3,000 per annum. I had $6,000 in mine.

The CHAIRMAN. I see Mr. Beall has $3,000 in his bill.

Mr. BEALL. Mine is for an assistant director. The bill provides for a bureau with a director at $5,000, and an assistant at $3,000.

The CHAIRMAN. Right on that point, before you proceed further, just let me say, for the consideration of the committee, that it seems to me from the act that the Secretary of Agriculture can now, under the law, do this very work.

Mr. WICKLIFFE. No.

The CHAIRMAN. "The Secretary of Agriculture is hereby authorized to continue investigation on the cost of food supplies at the farm and to the consumer, and to disseminate the result of such investigation in whatever manner he may deem best."

Mr. WICKLIFFE. I will say, Mr. Chairman, that that is hardly broad enough to give him sufficient authority, and then I think this: That if that were sufficient the Secretary would hardly have favored this legislation.

I will now read the report made by the Committee on Agriculture of the Senate:

[Senate Report No. 554, Sixty-second Congress, second session.]

April 3, 1912.—Mr. Smith of Georgia, from the Committee on Agriculture and Forestry, submitted the following report:

The Committee on Agriculture and Forestry, to which was referred the bill (S. 5294) to establish in the Bureau of Statistics, in the Department of Agriculture, a division of markets, having considered the same, report it back to the Senate with the recommendation that it do pass, with the following amendments:

The committee, in connection with the consideration of the bill, had before it, besides other information, two letters from the Secretary of Agriculture, parts of which are as follows:

"My views are that a division of markets in our Bureau of Statistics, adequately equipped with funds and employees to properly handle the matters involved in the proposed legislation, would be of great benefit to the farmers of the country, enabling them to be advised frequently and regularly as to the best points to which their various products should be shipped, thus avoiding congestion in certain markets and paucity of supplies in others, and that the probable cost of such a division would be much more than offset by the saving that would be effected to farmers through the aid that would be given them in the proper and economical marketing of agricultural commodities, particularly those of a perishable character.

"Of course the marketing of farm products is a commercial matter, and it would seem at first blush that the Department of Commerce and Labor should, perhaps, be placed in control of the proposed division, but the interests of the farmer are as greatly involved in the proper marketing of his surplus products as they are in their production. The two things production and marketing are intimately connected, and in that view it would be wise to place the proposed division in the Bureau of Statistics of the Department of Agriculture.

"The Chief of the Bureau of Statistics has stated in his testimony that if supplied with the requisite means the proposed division of markets can undoubtedly be administered here. It will take some little time to organize such a division and lay out proper, comprehensive plans for carrying on its work, but it can be done without any great difficulty if the requisite funds are provided for its establishment and maintenance."

I will call the committee's attention to the words of the Secretary of Agriculture, as I gather from them that he does not take it that under existing law the department could make this investigation and do this work now.

The CHAIRMAN. That suggests another point. There is already in the Bureau of Statistics a Division of Production and Distribution, and it is headed by George K. Holmes, which embraces this very idea. Then under this law there is full authority here for the Secretary of Agriculture to broaden this division and make it conform, as far as practicable, to your suggestion.

Mr. WICKLIFFE. But there is nothing sought there, Mr. Chairman, with reference to markets, and I can not conceive if the law is sufficient already to cover that that the Secretary of Agriculture would recommend to Congress the establishment of such a bureau.

The CHAIRMAN. But production and distribution involve a consideration of markets.

Mr. WICKLIFFE. Well, possibly by implication, but I think there ought to be a specific division for markets, not connected with production. My idea is that this subject is such an important one that you should confine the energies of some bureau or division to not more than one specific branch, and that is marketing.

The CHAIRMAN. Well, it is a question for discussion, of course.

Mr. TALCOTT. Well Mr. Chairman, don't you think it would be a good thing to have the Secretary come before the committee, and also Mr. Holmes, who is the head of the Bureau of Statistics?

The CHAIRMAN. I think we will have lots of them before we get through with this proposition.

Mr. MAGUIRE. Why not extend it to the production and distribution of all articles?

Mr. WICKLIFFE. That depends on how you word the bill. You understand, I am not particularly wedded to any details as to the measure you may report here. What I am striving for is some special body of competent and industrious men that will devote their entire time, not intermingled with their duties on other subjects, to this particular subject of the marketing of farm products.

Mr. LEVER. Let me ask the gentleman if he has given any consideration to the consolidation of all these small bureaus into one big bureau?

Mr. WICKLIFFE. I am glad to receive suggestions on that point. I would like to receive any suggestion which would prevent us from having to recommend another bureau. The minute you say "establish another bureau" to Congress now, they all take to the woods, as it were. They do not like the idea of establishing a new bureau, and the suggestion of the gentleman from South Carolina is an excellent one, if it can be accomplished so as to give them specific control of this subject.

The CHAIRMAN. That seems to be the idea of that report in the Senate.

Mr. WICKLIFFE. If you will permit me, I will continue the reading of this report:

"Of course, any estimate made in advance of a work so broadly new as contemplated by this bill must, in its nature, be tentative, but we have gone over the situation with considerable care and believe that the division can be organized, its plans laid, and the work contemplated by it actually begun during the first

year of its existence for the sum of $50,000. This sum may be divided as follows:

Chief of division	$3,000
Assistant chief	2,500
5 clerks, at $1,000 each	5,000
5 clerks, at $1,200 each	6,000
Office equipment	1,500
Rent	1,000
Necessary supplies and stationery	1,500
Expenses and salaries of 10 field agents	26,000
Incidental and miscellaneous expenses impossible to name in advance	3,000
Telegraph bills	500

"Of course this is a tentative estimate. As the work develops and enlarges increased appropriations will be required from year to year for the employment of additional field agents, and an additional sum would no doubt be required for the services of clerks in Washington; but for the first year my opinion is that the sum of $50,000 will be ample.

"Very respectfully,

"JAMES WILSON, *Secretary.*

"Hon. HENRY E. BURNHAM,
"*Chairman Committee on Agriculture and Forestry*
"*United States Senate.*"

So it appears, Mr. Chairman, that the Secretary of Agriculture is fully convinced that under existing law he could not perform this work. I think it an excellent idea, as suggested by the gentleman from New York, to have the Secretary of Agriculture before this committee, and anyone else that any of you gentlemen think could throw light on the subject matter.

Mr. TALCOTT. It seems to me the head of this Department of Statistics should also be asked to appear before the committee.

Mr. WICKLIFFE. Yes; the head of the very division to which our chairman referred awhile ago. He should undoubtedly come before the committee and state why it is, under existing law, this work can not be done.

Mr. HEFLIN. And why it has not been done.

Mr. WICKLIFFE. Yes; and why it has not been done.

Mr. TALCOTT. Whatever the machinery is, however, it does not give the results.

Mr. WICKLIFFE. Yes; and I have heard this idea of a bureau to investigate marketing methods—the necessity for it—suggested from so many quarters (not only from laymen, but from the Agricultural Department, too; and as much from laymen as from the Agricultural Department and more so) that it seems to me necessary.

Mr. TALCOTT. It seems to me to be a vital question and one which should not be settled until we have adequate information.

Mr. WICKLIFFE. I agree that we ought to have full information. Now, Mr. Chairman, Mr. Beall, who is the author of a bill on this subject, is present, and I will not take up more time.

Mr. HAUGEN. Mr. Wickliffe, is it your idea to devise a plan in order that the producer may sell directly to the ultimate consumer?

Mr. WICKLIFFE. The idea I had in my own mind is simply this: That if we could get some specific division or bureau in the Agricultural Department to give their entire time and study to this subject matter, they could work out a plan by which the ultimate consumer and producer could be brought far more closely together, and that they could give out that information to the producers, and in that way enable them to work along lines believed to be best, by

a study of marketing in different parts of the world; and you will see in the statement from Mr. Yoakum that he says in such and such a country he is advised this condition does not exist. Now, this division or bureau could look into a situation like that and find out what their system of marketing is, and if it is good give us the benefit of it. That is they could, by means of this investigation, give us the methods by which we could obtain the relief and, then, if necessary, they might recommend some legislation. But I do think this: That if we follow any other course, for instance, like having an investigation and spending a couple of years gathering information by this committee, or some subcommittee, why it would largely be abortive; while, if you will give this to some specific division or branch of the Department of Agriculture and tell them, "This is your duty, and none else," I think good results will be obtained.

Mr. McLAUGHLIN. I have been told that there always has been and always will be a large part of the produce of the farms sold near at hand, and that only the surplus is shipped far away. That being the case, it is more a local question than a national one; and what is your idea of why the Government should undertake it instead of the States? I am very anxious to let the State do what it ought to do and can do.

Mr. WICKLIFFE. That is true, but I take it to be the function of the Agricultural Department to inquire into and learn the fundamentals underlying any great method of production or of distribution, and give those ideas (not do the marketing for them)—but give them the lines on which to proceed.

Now, this is not a local issue, coming to your point, because I find, from my investigation, that these conditions exist nearly everywhere. From what I can learn, it is so down where I live, and it is so, according to Mr. Yoakum, up in New York; and you gentlemen here, from all parts of the United States, can tell whether you have heard the farmers of your respective districts comment upon the amount that disappears between the original producer and the final consumer.

Mr. McLAUGHLIN. Yes; the condition of high prices exists with us the same as it does in other places.

Mr. WICKLIFFE. I think this, that Mr. Yoakum is a very important witness on this matter, because he has given these figures; and I would like to know, and I would like the committee to question him as to where he got those figures.

The CHAIRMAN. Why did you not ask him to write you the basis for his figures?

Mr. WICKLIFFE. Because I thought he would be here, Mr. Chairman, and I thought it would be much better to have him examined by members of the committee than simply writing it in a letter.

The CHAIRMAN. I think that you will find that this difference in the price to the producer and the price the consumer pays applies to perishable articles chiefly, and it is due to the extended country such as we have. If you were to divide this country up into sections, like Holland, and let their distribution be confined to those respective places, I do not think you would have this condition.

Mr. WICKLIFFE. Let me say, Mr. Chairman, that the freight car facilities to-day allow you to put your perishable products in any market in the United States. As I said in opening, you can find

to-day that they are shipping strawberries, the most perishable of all products, from the Parish of Tangipahoa, in my district, as far northwest as Seattle, Wash., and as far east as New York right now.

The CHAIRMAN. But there is another factor in the situation, which is this: The State of New York and the New England States are eating perishable products to-day that come from away down south, and the high cost of living is due to the high cost of distribution, as well as the extravagance in this country.

Mr. WICKLIFFE. If the chairman will permit me, I respectfully submit that the potatoe, I suppose, is an article that is used by everybody, the poor people as well as the rich, and you see this enormous discrepancy in potatoes heretofore quoted by me, the farmer hardly receiving one-seventh of what the ultimate consumer pays.

The CHAIRMAN. Now, you could not cite a better case to prove the contention that this high cost of living is due to the transportation and local conditions. Down in my country they are raising potatoes which go to Ohio and Illinois. They are sending them on the C. & O. road continually, and they are not a perishable product. And, speaking of the various parts of the country, there has been a shortage of potatoes, and therefore they are getting a splendid price down there now for potatoes, but they can not control the markets of the country.

Mr. WICKLIFFE. I would like to ask the chairman if he thinks the figures are incorrect?

The CHAIRMAN. I do not assume they are.

Mr. WICKLIFFE. Admitting, then, that they are true, is it not our duty to try to do something?

The CHAIRMAN. Well, I contend that under the current agricultural appropriation act the Secretary of Agriculture can now investigate all of this matter.

Mr. WICKLIFFE. But he does not and can not, and I suggest that we have him before us and defer this discussion until then.

Mr. RUBEY. Mr. Chairman, I would like to hear from Mr. Beall.

STATEMENT OF HON. JACK BEALL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS.

Mr. BEALL. Mr. Chairman, I do not care to discus this matter, and, in fact, I do not know enough about the question to intelligently discuss it. I know that the opinion prevails all over the country that there is a wide divergence between what the producer receives for his products and what the consumer has to pay for them, and I share in the belief that somewhere, somehow, there is something wrong. I do not know what it is, and I do not know whether it is excessive profits to the people who stand in between the producer and the ultimate consumer; I do not know whether it is exorbitant charges of transportation—I do not know what it is. But I do believe that there is something wrong, and I think the time has come when this committee or some other agency of the Government should start some kind of machinery in motion to try to find out what the real facts are.

I do not think the committee is in a position now to vote for or against any bills that are pending.

Mr. STANLEY. I suggest that in the proper drawing of these bills and the wording of them, you could do it very comprehensively if you had a hearing or two on one of these bills.

Mr. BEALL. I thoroughly agree with the gentleman from Kentucky. I think it is a matter that ought to be gone into very thoroughly and very carefully, in order to ascertain what the facts are.

Mr. WICKLIFFE. I thoroughly agree with that.

Mr. BEALL. I do not know the basis of Mr. Yoakum's figures on that point.

Mr. WICKLIFFE. I think you know of Mr. Yoakum's.

Mr. BEALL. Yes.

Mr. WICKLIFFE. Is he a conservative man?

Mr. BEALL. He is understood to be a very conservative business man, and he has for years manifested a great interest in matters pertaining to promoting the agricultural interests of the country. He is a railroad president, but he recognizes that the prosperity of his road very largely depends on the prosperity of the agricultural people.

Mr. STANLEY. Do you not think it would be a good idea to have Mr. Yoakum here?

Mr. BEALL. I thoroughly agree with that, and Mr. Yoakum will come. We ought to have the Secretary and we ought to have the man that is at the head of the Bureau of Statistics and the one that is at the head of the division of production and distribution. We ought to know before we pass on the question just what authority the Agricultural Department now has to examine into these questions, and to give the people the benefit of such investigation; and, if they have the authority, why it has not been exercised.

The CHAIRMAN. Yes; I agree with you entirely.

Mr. BEALL. And I think we ought to go out and search for information. It may be that after the matter has been gone into it will be the opinion of the committee that it is beyond the power of legislation to reach it or affect to, but we are certainly in need of information on this subject; for, as I stated before, there is something wrong. We do not know what it is, but there is a feeling all over the country that there is something wrong, and that either the producer is receiving too little for his products or that the consumer is paying too much for them.

Mr. STANLEY. I was going to suggest that, even should it transpire that this committee should believe that the high prices are a result of transactions that are intrastate and for that reason would be beyond the jurisdiction of the Federal Congress, the publicity which would result from having a bureau of the Department of Agriculture issue a bulletin showing where this condition exists would, in a measure, destroy it. I do not wish to interrupt you, but I wanted to make that suggestion—that I am firmly of the opinion that there is no combination in restraint of trade which can stand the light of publicity if it is open at both ends. By that I mean if a combine is depending upon one hand for an open market for its raw materials and upon the other hand for a competitive market, as a better word, for its finished product.

Take, for instance, the Beef Trust. I have always maintained that vigilance on the part of the American people would prevent a dangerous monopoly in beef, and that the establishment of abattoirs in

various States with intelligent people agreeing to patronize their home industries would destroy the hold of the Beef Trust, for the reason that whenever they seek to sell and buy beef they are out of business; and if the consumer would buy and the producer would sell to a concern that would be satisfied with a fair profit, that would settle it. And if it happened that this enormous and unearned increment, for instance, was the result of cold storage, then the farmers themselves could easily enough put up cold-storage plants, as it has been ascertained from investigation that they would be able, in connection with electric-lighting plants or car lines, to maintain cold-storage plants at a limited expense; and if it is the result of transportation, we can reach it. I believe that the mere publicity of a combination like this will, in a great measure, eradicate it. That is not true, of course, where a concern owns it own raw materials, but that does not exist in connection with the handling of what the farmers produce.

Mr. BEALL. I am very much obliged to the gentleman from Kentucky for his suggestion, and I think it is worthy of very serious consideration by the committee. I do not know what the trouble is, and I do not know that there is any trouble, but there are certainly grounds to suspect that there is something wrong and sufficient on which to predicate a very careful examination by this committee to determine whether or not something can be accomplished by legislation.

I am sure Mr. Yokum would like to come before the committee. He is in touch with a large number of other people that are interested in this subject, and he has given special thought and attention to it for months and years; and from letters received from him and copies of letters that have been written to him, that he has forwarded to me, I know that he is in touch with a great many intelligent people who have studied this question and can give the committee the benefit of that study.

Now, I do not know whether the full committee would want to conduct these hearings, or whether they would want to designate a subcommittee for the purpose of having the hearings and making its investigation and report the conclusions with the testimony adduced, to the full committee. Either plan is entirely satisfactory to me. But, I do believe that it is a matter of such importance that we ought to go into it for the purpose of getting additional information.

Mr. HAUGEN. If you are interested in the high prices the consumers have to pay, why should we limit this investigation to farm products? It is not of as much importance to the farmer to know why he is paying exorbitant prices for his harvesters, and whatever else he buys in the way of farm implements and the things he needs on the farm as it is to the consumer in the city to know why he is paying exorbitant prices for the things he buys?

Mr. BEALL. Of course he is interested in that.

Mr. HAUGEN. Now, the gentleman from Kentucky has referred to the beef trust. He is very well aware of the fact that in the west, and I take it all over the country, wherever there is any butcher undertakes to kill local beef and sell it, the trust goes into that town and sells for half what it costs the local butcher to dress his beef and drives him out of business.

Mr. STANLEY. This is the only Government on earth—the only civilized Government—that would permit that sort of thing. The only thing that saved your independent oil people was the fact that they shipped oil to Germany, and as soon as the Standard Oil attempted to undersell, the German Government let it know that if it sold oil for one price in one part of Germany it would have to sell for the same price in all parts.

Mr. HAUGEN. It occurs to me that you are all the time investigating the farmer, and that you ought also to include the so-called trusts.

Mr. STANLEY. I would suggest right there that you take the Harvester Co. It is now under investigation by the Department of Justice, and in process of dissolution, I am advised.

Mr. HAUGEN. But it has been under investigation all these years and goes on just the same and always will.

Mr. STANLEY. Now, Mr. Haugen, in addition to that, the farmer does not sell anything to the Harvester Trust, but the farmer, so far as the Harvester Trust is concerned, is just an ultimate consumer.

Mr. HAUGEN. Yes.

Mr. STANLEY. I do not think the Department of Agriculture has it within its legitimate domain to investigate combinations in restraint of trade. That would be the province of the Department of Justice and the Bureau of Corporations and the Federal Congress rather than the Department of Agriculture.

Mr. HAUGEN. By reply to that I would say that the Agricultural Department has not the power under the Constitution or law, but a certain department has—the Department of Justice, or whatever department it may be. But my contention is that our duty is just as much to the farmer who buys the implements as it is to the consumer in the city who buys the farm products. If we investigate the cost of supplies to the consumer in the city, why limit it to the goods of the farm? Why not include clothing under that and street car fares and everything else?

Mr. STANLEY. Mr. Haugen, I believe that the Harvester Co. will be reached, and be reached very shortly, by some legislation. For instance, I have quite a number of reports I would like to show you, showing where the International Harvester Co. operates as common carriers. Now, that question has been thoroughly investigated by the committee that Mr. Beall and I are on, and that will be gone into immediately; and I am advised by a person who I think is entirely reliable that the legal status of that concern will be investigated. And in the same way I believe that combinations in restraint of trade in the steel and iron business will be thoroughly ventilated before any great length of time; but it is a matter over which the Federal Congress may have no control, as it is purely an intrastate transaction. The International Harvester Co. is clearly open to the law now existing, because in its very essence it is an interstate-coumerce concern. It is not only a producer of interstate-commerce traffic, but it is an interstate-commerce carrier, and there are half a dozen ways to reach the Harvester Co., but where a man forms a combination for the purpose of keeping up the price of cabbage and onions and does it within the borders of a single State, that is a matter for State control.

Mr. HAUGEN. I am glad to know that an investigation is being made and that we may look for some remedy of the harvester business

and the barbed-wire business, because they are the things that the farmers buy.

The CHAIRMAN. We have our hands full in considering the proposition before us this morning and we can not go into these other matters.

Mr. HAUGEN. Now, Mr. Chairman, I do not know whether I understood the gentleman from Louisiana or not, but my understanding is that it is his idea to devise some plan that will make it possible for the farmers or producers to sell directly to the ultimate consumer.

Mr. WICKLIFFE. My idea is simply this, I will say to the gentleman. There is too great a difference existing now in the price which the producer of farm products receives and that which the ultimate consumer of farm products pays——

Mr HAUGEN. We all agree to that.

Mr. WICKLIFFE (continuing). And this bill restricts the investigation strictly to the jurisdiction of the Department of Agriculture, so far as this matter is concerned, and proposes to let them have plenty of authority to investigate and find out what the matter is.

Mr. HAUGEN. Then I am right in my conclusion.

Mr. WICKLIFFE. I will say this to the gentleman, that I am satisfied in my own mind that this difference does exist; and as to how it may be remedied is a matter that we hope to get at by means of establishing this division or bureau, and letting them work it out.

Mr. LEVER. Let me ask the gentleman this question: This bill is predicated or your idea is predicated upon the thought that the farmers, on account of those large discrepancies which have been shown by the figures, are not getting for their raw products what they ought to get in view of the price paid by the ultimate consumer.

Mr. WICKLIFFE. That is the idea.

Mr. LEVER. And your idea is to help the farmer in investigating the matter, and possibly to help the consumer?

Mr. WICKLIFFE. Yes; undoubtedly. I claim this, that the final consumer might be helped, and in all probability will be, because if there is this difference existing, and it is done away with, the farmer will get a better price, and he can then afford to sell for a less price, possibly, to the consumer by having him come in more direct touch; because here is 54 cents out of every dollar that is now disappearing between the producer and the final consumer.

The CHAIRMAN. I will say to the committee that we will have hearings on this question and I will ask Mr. Wickliffe and Mr. Beall to let us know when these gentlemen can be here and we will summon the Secretary at any time and hold these hearings at your pleasure.

The committee then, at 12 o'clock noon, went into executive session.

ENCOURAGEMENT OF AGRICULTURE, HORTICULTURE, AND THE INDUSTRIAL ARTS IN THE VARIOUS STATES.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, April 10, 1912.

Hon. John Lamb (chairman) presiding.

STATEMENT OF REPRESENTATIVE JOHN A. MAGUIRE, OF NEBRASKA.

Mr. MAGUIRE. Mr. Chairman, I wish to call up for a hearing before the committee at this time a bill which I introduced, H. R. 18005. Mr. W. R. Mellor, of Lincoln, Nebr., is here, and would like to be heard on the bill, and I feel that the committee would profit by listening to him. He is secretary of the Nebraska State Board of Agriculture and also secretary of the National Association of State Fairs, and I know from his large and successful experience in managing State fairs that it will be a very great pleasure to listen to him. Before calling on Mr. Mellor I will make a few observations on the proposed legislation.

The bill is one providing that the Government shall appropriate for a building on each State fair grounds where the State itself through appropriation provides for the support of the State fair. I consider this a measure which will give a great impetus to the State exhibitions of not alone agricultural exhibits but exhibits of all kinds. The State fair in practically every State now has a permanent location with fixed plant and buildings. Mr. Mellor and others associated with him had much to do with originating the ideas in the bill and much credit is due him for the program of education which he has carried on in promoting the proposed legislation.

Fairs, State and county, are no longer limited by the original idea of an exhibit of farm products, but the exhibition is made up of every form of exhibits from the farm, factory, and mercantile establishments. In four or five days of a State fair quite a liberal education may be secured on what the progress of the year has brought forward, not alone in the State but in every line of human advancement over the whole country.

A great meeting of this kind, with men from every part of the State, with the ideas and information gained and there exchanged for the information from every one else, certainly gives renewed inspiration to the people of the whole State. The benefits of such a meeting can not be fully calculated in the material and intellectual improvement of the State.

The United States has expended millions in the past for the national and international exhibitions, when only a small fraction of the people can attend, while in this measure, the United States is asked to cooperate with the States, on their own fair grounds, in erecting something permanent to aid in these exhibitions of material and

educational development. Perhaps an average of 100,000 people annually attend each of these State fairs. We are moving in a line of agricultural extension and development very much these days. Not alone education and investigation, but demonstration as well is the keynote of our agricultural and material development. At no place is more of the field of demonstration apparent in all the lines of activity than at a well arranged and well managed State fair.

Transportation facilities are now so complete and so well arranged in most of the States that attendance for a few days at a State fair becomes more and more a matter of recreation and schooling, with but slight inconvenience and expense.

I expect to do all possible to secure the consideration and passage of this bill, at an early date and have hopes that those interested will meet with success. Mr. Mellor comes to you from a large field of experience, and I will now yield to him.

STATEMENT OF W. R. MELLOR, OF LINCOLN, NEBR.

Mr. MELLOR. I realize we have but a few minutes to discuss this subject. Therefore I shall hold myself to the subject in hand. I do not know but what it will be advisable for me to take this time to read this bill. I presume some of you have read it. Still, if there is no objection, it will only take two minutes to read it. The bill is as follows:

[H. R. 18005, Sixty-second Congress, second session.]

A BILL To provide for the encouragement of agriculture, horticulture, and the industrial exhibits in the various States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, and hereby is, appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $100,000, to be paid, as hereinafter provided, to each State for the purpose of promoting and encouraging the agricultural, horticultural, and industrial interests therein by means of the construction and erection of a suitable building to be used solely for the display of agriculture, horticulture, machinery, or industrial exhibits.

SEC. 2. That the appropriation herein made shall inure only to the use of those States which now or hereafter shall by statute recognize and make appropriation toward the establishment and support of a State fair or exposition upon land owned by and under control of the State or a State board created by legislative enactment, and no money shall be paid out under this act to any State failing to comply with the above provisions.

SEC. 3. That upon proof satisfactory to the Secretary of the Treasury being furnished by the governor of any State that said State has complied with the provisions of this act and is entitled to the use and enjoyment of said appropriation, the same shall then be paid by the Secretary of the Treasury out of the Treasury of the United States to the State treasurer of such State, who shall receive and set the same aside as a fund to be expended solely for the purpose provided for in this act.

SEC. 4. That the appropriation herein made shall be expended for the purpose designated in this act within two years after the receipt thereof by the State accepting the same, and said building shall be completed within two years. A full and complete report of said building, setting forth the expenditures in detail, shall be made by the governor of said State upon completion of said building, one copy of which report shall be filed with the Secretary of Agriculture of the United States and one copy with the Secretary of the Treasury of the United States.

SEC. 5. That the Government of the United States hereby reserves not to exceed twenty per centum of the space within said building so erected for departmental exhibits, providing not less than thirty days' notice is given prior to the opening of said fair or exposition.

SEC. 6. That the appropriation authorized by this act is made subject to the legislative assent of the several States to the purposes of this act.

Now, in order to expedite matters, I will just state my position in concise terms.

Mr. TALCOTT. The idea of the bill is to appropriate $100,000 to each State?

Mr. MELLOR. Yes, sir.

Mr. TALCOTT. Not annual appropriation, but just once?

Mr. MELLOR. Just once.

Mr. TALCOTT. At one time?

Mr. MELLOR. Yes.

Mr. MAGUIRE. You have some statistical data from different States to be distributed. The members of the committee might get a little idea from that data, just the importance of the various State fairs, and more particularly the business condition and standing of each.

Mr. MELLOR. I have a few here.

One of the questions for this congressional Committee on Agriculture to determine is the advisability for granting its support to the provisions of House bill 18005. By some this bill is considered a radical diversion from accustomed methods of agricultural education, but radical diversions are sometimes productive of much good and are but steps used in the progression of the human race. That to which we were accustomed years ago is now often considered obsolete and not for the best interests of the people. Undoubtedly you will be interested in hearing some of our reasons why we think this bill should receive your favorable consideration and support.

The State fair is recognized as a beneficial institution in a great number of our States, and as such receive legislative support. Some of the causes for such action are that no single institution of learning has contributed to such a great extent in accentuating the desire for pedigreed stock as has the State, district, and county fair. Here are seen the best type of horses, cattle, sheep, and swine—the finished product, for which every farmer is striving to attain. Here are seen the best fowls for farm use, the best products of the soil, the best methods of cultivation, the best arrangement for farm buildings and fields, the best methods of rotation of crops, the balanced ration for feeding, the various methods for the water supply, and the best lighting plant, and many other educational features. Here, also, is seen all kinds of farm machinery, so that should a farmer have the purchase of any particular machine in view, by attending any one of our great State fairs he can see all of the leading makes exhibited side by side, with an expert in charge, who exemplifies its particular merits, making it possible for him to make a judicial selection for the uses desired.

Some may say that such instruction at most of the fairs only lasts five days each year. We will grant that such is the case. The persons who attend are the busy men—the men of affairs, the men who provide the sinews to carry on the affairs of the county, State, and Nation; the men who have no time for extended schooling at the experimental stations of schools, but must gather their information from object lessons, the press, and actual experience. The school holding 180 days each year must have about 600 students to equal an attendance of 100,000, and we think that this number is about the average attendance for all of the State fairs. Many of them have several times this number. Therefore, as an educational institution, it is but just to compare its efficiency with that of the school with like attendance, and we believe it is superior from the

fact that an object lesson is the very best from which permanent instruction can be obtained.

An objection raised is that the provisions of the bill are not broad enough; that it should take in fairs owned by municipalities and other quasi public corporations. Were it possible to make such a proceeding constitutional, we would cheerfully say "Amen," for we are firm in our belief that more solid practical instruction is imparted for the money expended than by any of the present recognized generally subsidized methods.

We also believe that the conditions of this bill are broad enough to permit each State to participate in its benefits. Section 2 of the bill sets forth:

> That the appropriation herein made shall inure only to the use of those States which now or hereafter shall by statute recognize and make appropriation toward the establishment and support of a State fair or exposition upon land owned by and under control of the State or a State board created by legislative enactment, and no money shall be paid out under this act to any State failing to comply with the above provisions.

Generally on close examination we find that States recognizing State fairs are those which have been settled within the lifetime of some of us who are present. We are well aware that every new country makes strenuous effort for quick settlement, and thereby grasp every opportunity for advancement, probably from the idea that publicity pays the community as well as the individual. This may account for the lack of recognition of State fairs by the older settled States, as the evolution of older communities is exceedingly conservative. It may also be considered doubtful if all the States would come in under this act, as many of the large fairs are in the hands of business men who find it a profitable investment for surplus funds. Many such organizations, however, would gladly assist in securing legislative sanction to the provisions of this bill in the hope of broadening the fair's scope of usefulness to their community and State. Sections 2 and 6, as above stated, place the acceptation of its provisions wholly within the hands of the people of each individual State, and is broad enough that all may avail themselves of the opportunity offered. If all accept, it will mean an appropriation of $4,800,000 spread out over a period of several years. This marks the limit, as no other congressional appropriation for upkeep is necessary.

In the past the assistance of Congress has been solicited and by it granted in the holding of great national expositions at some certain point representative of the idea to be commemorated. Large appropriations for such occasions, lasting but for one season, have been made generally with popular commendation. However, when it is fully realized that the great distance to be traveled and the time necessarily taken has made it absolutely impossible for the busy man or the poor man to avail himself of the opportunity offered for visiting these great national fairs, which fact primarily makes such appropriations especially for the benefit of the rich or well-to-do class of our citizenship, while an appropriation under this bill would not only make it possible to construct a creditable exposition in each State for the housing of an exhibit of the State's resources in a building or buildings such as in many cases can not now be enjoyed, would give the busy man, or the less well to do, an opportunity to visit an exposition of merit close at home, neither entailing a great

loss of time nor expense. This "not well-to-do" class oftentimes includes many of our most industrious citizens, those upon whom the manual labor of life falls, those who are the bulwark of this great Republic, and whose happiness is so easily overlooked. Through the passage of this bill they are the men, now deprived, who will secure an added opportunity for information of a valuable character coupled with good wholesome enjoyment.

One of the conditions mentioned in section 5 is "that the Government of the United States hereby reserves not to exceed twenty per centum of the space within said building so erected for departmental exhibits" by giving 30 days' notice. This provision may not be clearly understood. For several years it has been customary throughout the more purely agricultural States to make naval exhibits at the State fair. According to statements made by recruiting officers, the boys from the rural districts are better specimens of manhood, make sturdier soldiers, and are not addicted to cigarettes and other health-undermining vicious habits. Therefore enlistments made from the agricultural States are a paying proposition for the Government, and exhibits made for the purpose of inducing a sturdy class of recruits is desirable to the Government for future results.

Fairs managed by private corporations are oftentimes very successful when located adjacent to great centers of population or enjoying special railroad privileges, such as obtain in Texas, for instance, where a ridiculously low rate is made for a trip to Dallas and return from the extreme parts of this great empire. However, in these days of attempted railroad legislation it is an extremely difficult task to obtain passenger-rate concessions in territory enjoying a less than 3 cent per mile rate.

Some of the State fairs already have well-equipped grounds, as some of the following values of plant will testify. On looking over the statistical figures coming under my notice I find as follows:

Illinois	$1,106,615.00	Michigan	$602,911.48
Texas	1,087,500.00	Oklahoma	331,583.29
Iowa	900,000.00	California	300,000.00
New York	850,000.00	Nebraska	283,694.00
Minnesota	736,140.00	Wisconsin	250,000.00
Indiana	642,000.00		

Some of the appropriations made for State fair assistance are as follows:

	1901	1903	1905	1907	1909	1911
California					$110,000	$55,000
Colorado			$15,000	$15,000	15,000	20,000
Connecticut					400	700
Illinois						[1] 448,600
Indiana				100,000	10,000	10,000
Iowa	$37,000	$47,000		75,000	100,000	85,000
Minnesota	59,000	30,000	110,000	149,000		4,000
Missouri	75,000	125,000	145,000	69,600		
Nebraska	39,000	7,000	14,000	24,000	54,000	19,000
New York	125,000	75,000	125,000	300,000	400,000	500,000
North Carolina	1,500	1,500	1,500	1,500	1,500	1,500
North Dakota		10,000	10,000	10,000	10,000	10,000
South Dakota						70,000
Tennessee	10,000	10,000	10,000	10,000	10,000	10,000
Washington	30,000	30,000	30,000	30,000	30,000	30,000
Wisconsin	4,000	20,000	50,000	65,000	[2] 150,000	
Wyoming					7,500	7,500

[1] In 10 years. [2] For 3 years.

We also find that the receipts for tickets alone at some of the fairs to be in 1911:

Texas, in 17 days	$150,000.00	Nebraska, in 5 days	$66,752.20
Iowa, in 7 days	121,505.50	Indiana, in 5 days	65,489.75
Minnesota, in 7 days	112,709.85	California, in 5 days	56,904.00
Illinois, in 5 days	78,002.75	Wisconsin, in 5 days	51,128.01
Michigan, in 5 days	76,373.95		

Gentlemen, this House bill 18005 is not seeking for special favors for any part of this great country, but is giving each one of you an opportunity to by your vote and voice participate in the location and construction of a lasting monument, at which a large number of your citizenship will annually gather to proclaim the greatness of your State and hold out to the world the pleasures and benefits of living in the best State of the best country on earth.

The CHAIRMAN. Virginia has got a State fair; you have not got a report of Virginia.

Mr. MELLOR. They have not reported to me.

Mr. HAWLEY. Oregon has a large fair.

Mr. MELLOR. I have written to Mr. Merth, and I guess he is away from home.

The CHAIRMAN. I invite you to come down in Virginia and see our fair.

Mr. MELLOR. I have written your secretary. I have a table of appropriations made; that is, by some of the States. I do not know whether you would consider that material or not. I have here California, 1907, appropriated $110,000, and in 1910, $55,000.

Mr. RUBEY. I would suggest you put those figures in the record.

Mr. PLUMLEY. I hate to have that go in there and have my State left out.

Mr. MELLOR. I wrote your secretary.

Mr. HAWLEY. I suggest he complete it and put it in.

Mr. MELLOR. Yes; I will do so.

Mr. PULMLEY. Yes; when it is completed.

Mr. MELLOR. I will be pleased to write for all these and have them sent to the clerk or sent to Mr. Maguire. These States have not responded. Some of them I may get to-day. Two of them have arrived since I got here yesterday, and it might be some of the others will arrive shortly, but I should be pleased to have you get the completed statement.

The CHAIRMAN. Can you get it in time to go into this record?

Mr. MELLOR. I will try to. When have you got to have it?

The CHAIRMAN. Can you get it here in a month?

Mr. MELLOR. Yes, inside of that I think. I shall go to work right on the spur of the moment of getting home and try to get all these figures.

Mr. PLUMLEY. We have State land and the fair owns its own ground.

Mr. MELLOR. I have written Mr. Davis two or three letters, but some of the gentlemen who are secretaries lay them down and do not think to take them up. They do not think they need answering right away, and possibly have been a little bit slow about answering.

Mr. SIMMONS. What is your intention about this? A great many of the States have already erected buildings for this very purpose, and the appropriation is for the erection of buildings. Now, where build-

ings have been erected, and it is not necessary for them to duplicate them, they have already sufficient space to make these exhibits.

Mr. MELLOR. I do not think any State fair ground has buildings enough for all of the things mentioned in this bill; that is, for agricultural, horticultural, or industrial exhibits. I think that any of them would be pleased to secure a good permanent building along that line. But it is not so important for the State that is well equipped, possibly like Ohio, or maybe Minnesota, as it is for States like North Carolina or South Carolina or Georgia or Vermont, or some of the States that are not so fortunate.

The CHAIRMAN. Where a State has these buildings, what would you do with the fund?

Mr. MELLOR. They can use it only under the provisions of the bill, Mr. Lamb, because that is the only thing the bill allows; and if they can not use it under the provisions of the bill, of course they could not secure the appropriation. Now, Mr. Rosejohn and Mr. Pogue are here, and possibly you would like to hear them.

Mr. ROSEJOHN. We have not anything. Mr. Mellor has covered the ground fully.

Mr. SIMMONS. I want to ask Mr. Mellor how much appropriation the State must make in order to entitle us to the provisions of the bill. How much they must have.

Mr. MELLOR. The bill does not provide for the State making any appropriation whatever.

Mr. SIMMONS. It must have land?

Mr. MELLOR. It must have land or land under the control of the State board, created by legislative enactment. The idea of that is that I find that in the States of Indiana and Illinois, for instance, the title to the land vests in the State board of agriculture, that is a State board created by legislative enactment; it belongs to the State practically, and I think it is but just and fair to say that that is State land.

Mr. SIMMONS. Practically it must be land upon which this building can be placed that the State owns, or the State board?

Mr. MELLOR. Or the State board, recognized by legislative enactment.

Mr. SIMMONS. And it must make annual appropriations for the support of the State fair?

Mr. MELLOR. No; it does not say it must. I tell you where it is not necessary. A great many of these State fairs are self-supporting. Now, take Nebraska, for instance. We have put on about $140,000 out of the profits of the fair, so that it is not absolutely necessary to make appropriations for its support, but it is necessary to make appropriations for large buildings, because these profits come in small dribs, possibly $8,000 or $10,000, where large buildings cost a great amount of money as you are all undoubtedly aware.

Mr. SIMMONS. On page 1, according to that they must make some appropriation, but no amount is mentioned.

Mr. MELLOR. Yes; they make some appropriation, maybe a couple of thousand dollars for premiums, or something like that.

Mr. SIMMONS. Some appropriations?

Mr. MELLOR. Yes.

Mr. WICKLIFFE. I should like to state my colleague, Judge Watkins, of Louisiana, requested me to let him know when the hearings

would take place on this measure; he requested to be here, and I would like to ask at what time the continuation of the hearings will be?

The CHAIRMAN. This is just done to oblige Mr. Maguire.

Mr. WICKLIFFE. There will be further hearings, will there?

Mr. MELLOR. I am at your pleasure. I would not dictate to you gentlemen.

The CHAIRMAN. So far as that is concerned——

Mr. WICKLIFFE (interposing). Do not let me intimate I desire to displace you or any one with your party at this time. I was only mentioning that to remind the gentlemen so that they would not overlook giving Judge Watkins a chance.

Mr. MELLOR. I know what the idea to be expressed is. Mr. Brugerhoff is a very respected member of our American Fairs and Associations, attends the convention every year, and Mr. Brugerhoff is the secretary of the Shreveport fair, and it is not now a fair that is owned by the State, or under provision that would receive support without legislative action.

Mr. WICKLIFFE. That is a matter with my colleague, Judge Watson.

Mr. MELLOR. Yes; that is what Judge Watkins wants to be heard on.

Mr. WICKLIFFE. He asked me, as I was a member of the committee, to request a chance to be heard. That is the object of my request.

The CHAIRMAN. We have not anybody else to be heard now?

Mr. MELLOR. No.

The CHAIRMAN. Do you want Judge Watkins to be heard, Mr. Maguire, at any time?

Mr. MAGUIRE. Certainly; whenever it is convenient for Representative Watkins and the committee to have a hearing I would be glad to have him present his views on the bill.

Mr. PLUMLEY. Would you like to have the hearing while Mr. Mellor is here, so he might know?

Mr. MELLOR. Well, I know that is the object of the hearing, because Mr. Brugerhoff has so advised me that he has asked the gentlemen to put forth the claim of recognizing a fair owned by a municipality, but, gentlemen, that is almost absolutely impossible for the constitutionality of the act.

Mr. WICKLIFFE. I would suggest, though that is a matter I am not in position to say one way or the other about, as it is a matter that appertains to my colleague, in his district, and, with all due deference to Mr. Mellor, if he will give my colleague a chance to be present when he discusses it, it would be fair to all concerned.

Mr. HAWLEY. We have a meeting this afternoon. We might take a few minutes at the beginning of the meeting and hear your colleague.

The CHAIRMAN. I do not think we could interfere with that subcommittee. We would just encroach on that time. I have no objection, of course, to hearing you gentlemen a short time to-morrow morning.

Mr. MELLOR. As far as I am concerned I am just as free to say that I am willing to have these gentlemen come and talk to you in my absence, because I put forth our side of the question, and I will leave you to judge as to the merits of both sides. That is fair, and

it is not necessary that I should stay, because I have no refutation to make. I should be pleased to see every municipality have a building, because I actually think—I am firm in my belief—that this is an educational feature that is second to none, but it is a question of constitutionality. We fought that out on the floor of the American Fairs and Expositions. Mr. Brugerhoff differed with me honestly, and he said that under their plans that they could not participate without getting the legislature to make some enactment for them. Now, I said to him: "Get your legislature to make the enactment, so that you can participate. I think the legislature would do it, because it is of value to Louisiana."

State.	Appropriations.	Tickets.	Total.	Premiums.	Improvements.	Total.	Value.
Alabama	$4,000	$43,000.00	$5,040.00	$15,110.50	$5,000.00	$50,000.00	$150,000.00
Arkansas		13,905.25	26,503.60	9,195.41	2,440.15	26,680.02	105,000.00
California	55,000	56,904.00	89,964.08	38,696.95	88,216.95	389,964.08	300,000.00
Colorado	20,000	11,965.00	22,260.19	8,301.00	2,838.05	34,938.00	50,000.00
Connecticut	700	39,904.75	78,673.73	32,099.00	1,500.00	69,352.85	225,000.00
Georgia		19,350.00	35,150.00	8,447.00	1,700.00	20,639.00	85,000.00
Idaho							
Illinois	5,000	78,002.75	136,602.30	44,444.46	811.58	160,158.73	1,106,615.00
Indiana	10,000	65,489.75	110,345.23	46,623.69	10,279.80	100,468.82	602,000.00
Iowa	85,000	121,505.50	179,549.67	56,364.35	109,775.04	137,867.51	900,000.00
Kansas		38,499.00	65,198.00	34,390.00	12,315.00	53,475.00	71,500.00
Kentucky	15,000	38,854.00	69,054.05	25,444.00	4,192.53	70,096.19	150,000.00
Louisiana	[1] 40,000	25,000.00					300,000.00
Maine							
Maryland	800		17,542.43	8,194.50		16,692.51	37,500.00
Massachusetts							
Michigan		76,373.95	217,441.60	46,829.38	18,615.04	155,206.36	602,911.48
Minnesota	4,000	112,709.85	267,849.97	54,340.50	32,882.58	263,559.84	736,140.00
Mississippi			41,732.42			41,673.28	41,000.00
Missouri	[2] 605,000	35,864.25	91,865.68	33,711.59	23,400.00	99,079.51	475,147.15
Montana							
Nebraska	19,000	66,752.20	125,107.83	29,477.18	33,694.00	87,091.23	283,694.00
Nevada							
New Hampshire							
New Jersey		8,452.63	86,773.95	16,501.45	9,612.00	71,127.44	175,000.00
New Mexico							
New York	500,000		318,976.64			232,833.24	850,000.00
North Carolina	18,000	14,359.75	34,718.04	4,216.44	4,627.40	31,920.73	90,176.70
North Dakota	15,000	17,314.65	42,179.30	5,241.95	3,224.56	43,036.88	78,187.67
Ohio	[2] 397,000	62,715.70	92,257.70	38,625.30		92,257.70	2,000,000.00
Oklahoma (school land)		43,080.70	99,615.50	16,097.74	33,530.69	110,735.51	331,583.29
Oregon	23,500	19,277.95	57,381.81	16,815.00	6,572.32	66,151.72	94,800.00
Pennsylvania							
South Carolina							
South Dakota	28,000	27,152.25	41,873.90	11,277.53	4,969.67	41,873.90	90,000.00
Tennessee	10,000	34,827.00	60,868.00	23,909.63	6,400.00	60,320.87	100,000.00
Texas		120,351.25	187,903.03	41,159.75	44,594.44	143,644.70	1,007,500.00
Utah							
Vermont	10,000	21,000.00	30,200.00	17,000.00		26,700.00	50,000.00
Virginia							
Washington	15,000	15,230.25	46,637.97	9,021.61	5,897.62	46,310.43	70,000.00
West Virginia							
Wisconsin	65,000	51,128.01	115,298.95	43,824.83	8,144.98	114,650.20	250,000.00
Wyoming	7,500	4,160.25	2,098.35	4,010.48	3,979.05	10,185.37	17,800.00

[1] 6 years. [2] 10 years.

Arizona, Delaware, Florida, and Rhode Island not included; no record.

NATIONAL OLD TRAILS ROAD.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, April 19, 1912.

The committee met at 11 o'clock a. m., Hon. Asbury F. Lever presiding.

Mr. LEVER. Gentlemen of the committee, Representative Borland, of Missouri, wishes to introduce a number of ladies representing the Daughters of the American Revolution, who desire to be heard on H. R. 17919, to provide a national ocean-to-ocean highway over the pioneer trails of the country; also to aid the States through which the highway described as the National Old Trails Road shall run in extending, constructing, rebuilding, and repairing the same.

We regret that there are but 12 members of the committee of 21 present; but we understand that several of them are attending meetings of other committees and some are temporarily out of the city. Mr. Borland will take charge of the hearing and introduce the speakers.

STATEMENT OF HON. WILLIAM P. BORLAND, A REPRESENTATIVE FROM MISSOURI.

Mr. BORLAND. At the request of the Daughters of the American Revolution I have introduced in Congress a bill (H. R. 17919) to provide for marking and improving as national highways the old historic trails crossing the continent from ocean to ocean. The trails thus designated consist of the Braddock, or Washington, Road from the seaboard to Cumberland, Md.; the Cumberland Road, or National Pike, from Cumberland, Md., to the Mississippi River; the Boones Lick Road from thence to Franklin in the central part of Missouri; the celebrated Santa Fe Trail from Franklin, through Independence, Mo., to Santa Fe, N. Mex.; the route of Gen. Kearny's march from Santa Fe westward to the Pacific coast. Added to this is the Oregon Trail, which diverged from the Santa Fe Trail near Gardner, Kans., and ran from thence northwest to the Pacific Ocean at the Valley of the Columbia. To make the historic routes complete the later cut-off of this trail has been added from Council Bluffs, Iowa, and also the goldseekers' trail from Fort Hall on the Oregon Trail to the gold fields of California. These roads form a continuous chain of historic highways crossing the continent by the easiest natural grades and through the most central portion of our country. They mark the progress of the American Nation in its conquest of the continent for civilization.

The Braddock's Road really began at Hampton, Va., and extended into the Valley of the Ohio. Although it is popularly known as Braddock's Road it is more properly, in every sense, Washington's Road. It was the first pathway across the Allegheny Mountains and

into the Valley of the Ohio at the time when the entire western slope of the mountains was in the actual possession of the French. It was the beginning of the national expansion westward, the first step of which was to dislodge the foreign power from the Ohio Valley. In October, 1753, Washington was commissioned by the governor of Virginia, in company with Gist, to make his way over the Allegheny Mountains into the Valley of the Monongahela to warn the French commander not to trespass upon English soil. He made this trip through an unknown country overrun with hostile savages who had been inflamed against the English, and into the very heart of a wild region dominated by the French forts. After performing his duty with his usual quiet courage he returned to Virginia and made his report. His report indicated that England would have to fight for the possession of the Ohio Valley. The next year, 1754, he led a company over the same route and defeated the French at Great Meadows. By the following year, 1755, the British Government had been aroused to the gravity of the situation and dispatched Gen. Braddock to the colonies. Washington accompanied Braddock on his ill-fated and mismanaged expedition and suffered in the general defeat. The road over which the troops marched was the same path which had been blazed by Washington and I have never been able to understand why the name of Braddock clings so tenaciously to this road.

One of the earliest friends of good roads among our public men was that keen-witted Swiss emigrant, Albert Gallatin. Gallatin was a man of education and accomplishments and the society of the gay capital of Richmond had great attractions for him. Nevertheless, in 1784, he crossed the Alleghenies to Monongahela County, Pa., to establish a home in the wilderness. It was supposed by his friends that he had buried himself and ruined a brilliant career, but out of that wildnerness he created the mighty Commonwealth which, recognizing his genius as a constructive statesman, made him successively a member of the Pennsylvania Legislature, a leader in Congress, a Senator of the United States, a member of the Cabinet, and the greatest figure in American financial history. It was in the wilderness that he first met George Washington. Washington was seeking, with the aid of Indian guides, the most practicable route for a main highway across the mountains. After a day's exploring he had come to a hut in which Gallatin and other men were living, and was using Gallatin's rude bunk for a table while he made those elaborate notes of his doings which were so characteristic of Washington. Gallatin in the meantime was lying on the floor, having been evicted from his bunk. As Washington laboriously went over the reports of the different routes Gallatin, then a young man of about 18, and with a mind that worked with the speed of lightning, jumped up and exclaimed: "That is the only route." He says that Washington slowly took off his horned spectacles and gave him a look of severe disapproval in utter silence. After Washington had gone over the reports for over an hour more he finally turned to Gallatin, took off his spectacles again and said: "Young man, you are right."

Gallatin was the real father of the Cumberland Road, although in later years Henry Clay managed to identify himself very thoroughly with its construction. The Cumberland Road was begun in 1806 by an act of Congress signed by Thomas Jefferson. Between 1806

and 1834 it was constructed, under national authority and by successive appropriations of Congress, to a certain point in Indiana, and was surveyed by way of Vandalia, Ill., to Jefferson City, the capital of Missouri. About $7,000,000 of public money was spent upon its construction, a part of which sum was the proceeds of a fund reserved for that purpose from the sale of public lands in Ohio, Illinois, and Indiana. This national road, during its existence of nearly 30 years, played an important part in the expansion and development of the young Nation. It was worth many times its cost, both commercially and politically. It was the great highway of commerce and travel between the States of the Atlantic seaboard and the growing communities in the Mississippi Valley. It furnished the necessary link between the two parts of the Nation which prevented sectional hostility and disintegration. Its decline in importance and its final abandonment was due to the rise of the steam railway system. As the railways began to extend, the importance of the national highway diminished. The reliance of the people upon it became less complete and the hostility to it gradually forced its entire abandonment. About 1834 it was turned over to the States through which it ran and has been preserved after a fashion as State highways.

At the Mississippi River the Cumberland Road would have met the celebrated Boones Lick Road, the first highway to penetrate the wilderness west of the great stream. In 1797, while Louisiana was still Spanish territory, Daniel Boone, under a concession from the Spanish governor, settled a small colony of Americans about 20 miles west of the Mississippi River, in what is now Warren County, Mo. This was the first invasion of American settlers into the great trans-Mississippi territory. In 1804, the same year that the American Government took possession of upper Louisiana, Daniel Boone's two sons established themselves at a salt lick more than 200 miles to the westward. They were engaged in the manufacture of salt, which was floated down the Missouri River in rawhide canoes. The richness of the territory in which they were located attracted a large number of enterprising pioneers, mainly Kentuckians. The country became known as Boones Lick country. It was the heart of the great Louisiana Territory and the birthplace of many of the famous pioneers and explorers of the West. In 1815 a roadway was surveyed and built from St. Charles, Mo., to Old Franklin in the Boones Lick country. This road was known as the Boones Lick Road, and was the highway over which the advancing army of pioneers entered the territory beyond the Mississippi. As Boones Lick was the farthest outpost of American civilization, it was often referred to in derision by Henry Clay. He was very fond of calling Thomas H. Benton "the statesman from Boones Lick," although Benton was a man of education and culture and really lived in St. Louis. It was from the vigorous and enterprising community of Boones Lick that the start was made to open up the commerce of the great southwest. Capt. William Becknell started from that point in 1821 on what is now believed to be the first successful trip on a trading expedition to Santa Fe, N. Mex.

As long as Mexico was under the rule of Old Spain the policy of the rulers jealously excluded American traders and in fact looked upon all Americans as intruders and spies. The few Americans who found

their way into Spanish territory prior to 1821 suffered imprisonment, oppression, and robbery. In 1821, however, Mexico successfully established her independence from Spain. This made possible the beginning of commercial intercourse between the two countries. The policy of Mexico was the reverse of that of Spain. She welcomed and encouraged the American traders and even furnished them, as did our Government, with military aid as a protection against the Indians. Soon after the headquarters of the Santa Fe trade were moved westward to Independence, Mo., and from thence onward for more than a quarter of a century until New Mexico became American territory, this great historic highway, known as the Santa Fe Trail, led from the last outlying trading point in the Missouri Valley to the first great center of Spanish civilization in the Southwest. In 1824 Senator Benton had passed an act of Congress by which a survey was made of the Santa Fe Trail from Fort Osage, in Jackson County, Mo., to Santa Fe, N. Mex. I can not pause to give even briefly the history of that wonderful highway and its tremendous influence upon the destiny of the American Nation. It was the safety valve of those turbulent forces which are as common to the youth of nations as they are to the youth of man. It is one of the great historic highways of the world, marking the progress of civilization.

It was down this celebrated highway that Gen. Kearny and Col. Doniphan led their celebrated expedition in 1846 at the outbreak of the War with Mexico. This expedition resulted in the annexing to the United States not only the New Mexican Valley, but all of the vast golden land of California. As soon as American supremacy was established at Santa Fe, Gen. Kearny started westward for the Pacific coast, and the last great link in the chain of historic highways which takes the American people across the continent is the route over which Gen. Kearny marched from Santa Fe to Monterey, Cal. In 1841–42, after the Santa Fe Trail had been well established, the Oregon Trail came into prominence. The Oregon Trail branched off from the Santa Fe Trail at a point less than 100 miles west of Independence, Mo. It ran from thence northwest up the valley of the Blue River into the valley of the Platte, and thence westward until it crossed the mountains at South Pass and led down into the valley of the Columbia River upon the Pacific slope. Over this highway the great prairie schooners pursued their laborious way, carrying American settlers into the Oregon Territory and reclaiming and holding for American occupation that wonderfully rich section of our land. This same great trail was used soon after by the gold seekers of 1849. The earliest route of travel for those destined to California was over the Oregon Trail as far as Fort Hall, and thence diverging southwest to Sutter's mill in California. By 1850 the continent had been crossed, and Benton, in his speech at St. Louis at the inauguration of the Pacific Railroad, pointed to the west and uttered his famous words, "There is the East. There lies the road to India."

Thus these great historic highways connect with one another in a complete chain across the continent. They furnish the most remarkable example in history of the victories of peace and the steady progress of civilization. Only in rare instances did they resound to the tread of martial hosts; but day after day, year after year was heard the music of the creaking wagon and the lowing ox. All of the mighty host who crossed these highways were armed not alone

with the rifle, but with the ax and spade. They took with them not the ammunition wagon and artillery, but troops of live stock and bales of household goods, the implements of husbandry and the women and children, the evidences and guaranties of a future State, the earnest of permanent settlement and the basis of an American home.

Each of these great highways marks a crisis in the career of our country; an epoch in the history of the world. They show a virile young nation gathering with eager hands the fruits of the great Revolution—the conquest of a continent. Their purpose was homes; homes for the millions; homes for the humble; homes for the toiler; American homes that meant opportunity and a higher and purer civilization. Some day a genius will arise able to give to the world the epic of America, the poem of a Nation whose whole history is a mighty symphony of civilization, touching strange chords and swelling with a power but vagely understood. It will show a race which has subjugated nature, commanded fate, marshaled the forces of science, solved the problem of self-government, and written its autograph across a continent in the historic trails that marked the mighty movements of a people.

All honor to the Daughters of the American Revolution for the work their hands have found to do in preserving and perpetuating these great historic highways.

Mr. Chairman, I will now introduce Mrs. A. H. Horton, of Kansas.

Mr. LEVER. We will be glad to hear Mrs. Horton.

STATEMENT OF MRS. A. H. HORTON, OF KANSAS, CHAIRMAN GOOD ROADS COMMITTEE, DAUGHTERS OF THE AMERICAN REVOLUTION.

Mrs. HORTON. Mr. Chairman and gentlemen of the committee, we have done so much in Kansas that I really do not know what to tell you; but I must say a few words in regard to the Santa Fe Trail.

Mr. Borland in his remarks stated that we were marking the trail. We were the first State which marked the trail, and the suggestion of marking it originated with a Kansas woman. We have marked the Santa Fe Trail across the State by red granite bowlders at intervals. We have something like ninety-odd in the State.

Then the different chapters of the D. A. R.—raising the money themselves as chapters—have marked certain spots with bowlders, costing from $50 to $100 each. Mrs. Bowron spoke of Pawnee Rock. Pawnee Rock, as all who know the history of the Santa Fe Trail and the history of Kansas can tell you, was a very important point. Over a hundred battles were fought there; it was a gathering place for the Indian tribes, for the pioneers, and for the people who were traveling over this Santa Fe Trail; and hundreds of names were engraved on the face of that bowlder, which formerly stood up to a height of 150 feet. The lower portion of it has now become somewhat covered by sand which drifted in, and some of the rock has been cut away, I am sorry to say; but such names as Kit Carson have been engraved there and are still legible.

The Daughters of the American Revolution, together with other women of Kansas, have raised $4,500 for the purpose of improving a park of 5 acres in which Pawnee Rock stands. The German farmer

who owned some 160 acres, including that spot, donated the 5 acres to the women of Kansas, provided they would place certain improvements upon it. They have done that, and a monument is to be unveiled on the 24th of May; and that land with the Rock and the improvements was deeded to the State of Kansas and accepted by the legislature in joint session two years ago last winter; and they set aside a sum to keep that park in order. Trees have been set out, and it has been fenced and improved, and will be kept as a public park.

Now, naturally, the Daughters of the American Revolution of Kansas and other women interested in this movement are anxious, if a highway is built, that it shall follow this old trail. This trail followed largely the path of the buffalo and other animals who traversed that country, and the early pioneers naturally selected the best route. It goes almost straight across the State until it gets to the far West.

In Kansas it is not difficult to build roads; we have no mountains to tunnel, or anything of that kind. The people generally are very much interested in good roads. They are this week attending a convention in Kansas City which was called by the Missouri Old Trails Association, which many of these old trails people expected to attend; and they will try to have the Santa Fe Trail adopted as the route across the State. The women are interested, having put their time and money into marking that trail. We interested the school children, also the State Historical Society; and we hope that that will be made our part of the national highway. We hope also that the whole national highway will be built; and I am very sure that Kansas is willing to do her part. [Applause.]

Mr. BORLAND. Mr. Chairman, I would like to present next Mrs. Walter J. Reed, the State regent of the State of Washington.

STATEMENT OF MRS. WALTER J. REED, STATE REGENT OF WASHINGTON.

Mrs. REED. Mr. Chairman and gentlemen, I can not tell where to begin, because I am from the State of Washington, and the State is so tremendous. Our assembly recommended that we should go on the Oregon Trail from the Columbia River to Olympia, our State capital. There is a bill pending before the legislature in our State for an appropriation for good roads, and the Daughters of the American Revolution are not as strong in that State as they are in some of these Eastern States. We have only 750 members, but we are a power, because women vote in the State of Washington [laughter and applause], and they had the first general good-roads meeting in the country, I believe, called to meet at Tacoma in February last. I was there and spoke for the Daughters of the American Revolution. It was a women's movement altogether, but the men were very enthusiastic; and I want to tell you that the Sons of the American Revolution and the men of Washington generally gave us this vote. We did not ask them for it, and they did not know that they were giving it to us. [Laughter.]

Now, I asked them in our assembly in Washington: "You say it is not logical to talk about the old trails in the State of Washington, and making a national highway, because it does not go across the State. I come from the irrigated district, the Yakima Valley, and that does not appeal to us at all there as a commercial thing." So I

asked them to work in with the good roads movements as they find them, as the men in the State are putting them forward, and then try to work in the old trails road idea. I delivered an address in Tacoma about it, and they called it "Mrs. Reed's address about the picturesque places," and I said that I did not like that; I wanted to be practical, not picturesque. We have history up there in Washington, not a great deal of it, but some; and we D. A. R.'s are standing for what we can in a practical way: and there is no reason why we can not have our historical road—the Old Oregon Trail—made a part of that road. There is a bill before our legislature now to appropriate about $5,000,000 for good roads; and I think that we are going to get it, because the farmers, of course, can not get across the State without it. [Applause.]

Mr. BORLAND. Mr. Chairman, I would like next to introduce Mrs. Mark Salisbury, of Missouri.

Mr. LEVER. We shall be glad to hear Mrs. Salisbury.

STATEMENT OF MRS. MARK SALISBURY, OF MISSOURI, REGENT, ELIZABETH BENTON CHAPTER, KANSAS CITY, SECRETARY.

Mrs. SALISBURY. Mr. Chairman and gentlemen of the committee, I did not know that I was to speak here this morning. But I will say that our State, as Mr. Borland has told you, was the first to make a cross-State highway; and since last October, when our good roads committee was formed, we have been in correspondence with both men and women all through the country, and in all the letters that we have received the writers have shown interest and have promised to do everything they can for us in this matter.

We had some correspondence with ex-President Roosevelt. He said that he believed in the work that we were doing; he would not promise to help us in our movement; but he thought that this work was the best work that the Daughters of the American Revolution had ever undertaken.

We had a letter from Champ Clark, in which he said that he would do everything he could for us; that he believed in the movement and would help us in every way possible. Of course we are sorry that when our bill went in it did not go in as the bill of the Daughters of the American Revolution; but even though it did not so go in we are going to do everything that we can to further the movement and see that the bill goes through, and from the correspondence I have had with the Daughters of the American Revolution in other States I can not see how the expense to the United States Government would be very great, because the States are taking it up and are building the roads, and a great part of the Old Trails Road across the country is already constructed and in very good shape, as Mr. Thomas W. Wilby, who went as Government agent under Mr. Logan Waller Page's instructions, across the country in his automobile last fall, said that he followed this trail clear across from New York to San Francisco and back over the Kearny Road, Santa Fe Trail, the Boons Lick Road, the Missouri Cross-State Highway, and the old National Road, and on to Washington. He found the roads in excellent condition, and he thinks it would be fatal as a national highway should it be diverted at any point from the historic Old Trails Road. [Applause.]

Mr. BORLAND. Mr. Chairman, I will introduce now Mrs. John F. Mack, chairman of the good roads committee in Ohio.

STATEMENT OF MRS. JOHN F. MACK, OF OHIO.

Mrs. MACK. Mr. Chairman, our committee has so recently been formed that I did not expect to be called upon here at all to-day; but I can say that we have been organized in this way: The chairman of every county committee of the good roads movement is a member of the Daughters of the American Revolution. The road enters Ohio in Belmont County and crosses the State going out at Preble County, and it is in a very good state of preservation of the work of marking and improvement of the roads. The good roads bill will come up at our next legislature, and we are hoping for an appropriation.

The good roads committee has already formed plans for good roads reaching from county seat to county seat on the trail; and if these plans prove successful, it will become the State highway, so that I feel sure that this movement is going through in the State of Ohio. [Applause.]

Mr. BORLAND. Mr. Chairman, I will next introduce Mrs. Morris L. Croxall, chairman good roads committee of Maryland.

STATEMENT OF MRS. MORRIS L. CROXALL, CHAIRMAN GOOD ROADS COMMITTEE OF MARYLAND.

Mrs. CROXALL. Mr. Chairman and gentlemen of the committee, I speak for Maryland, being chairman of the Maryland movement for old trails. The inception of this idea is due to Kansas women, who started about five years ago the marking of the Santa Fe Trail in Kansas, and I suggested three years ago that something ought to be done after this lapse of many years to mark the celebrated Braddock Road, and they were kind enough to name me as chairman in charge of the matter. Mr. Blair Lee in 1910 introduced into the State legislature a bill, but no action was taken. I then requested the District of Columbia, Virginia, and Pennsylvania Daughters to fall into line in this movement. Pennsylvania has done so already. They have appointed a fine committee and they have done fine work. In Maryland, I think, there is nothing much to be done. The roads are in fine condition from the Potomac River to Cumberland, over which Gen. Braddock took his troops.

Now, that map [indicating], if I may call attention to it, is rather incomplete. I think that main black line that you see there should be continued down to Hampton, Va., where Gen. Braddock landed his forces in February, 1755.

The chairman and members of the D. A. R. chapter at Rockville are ready to place a bowlder at Owens Center, now known as Rockville, within a very few weeks, and with that we will commence our work of marking these places in Maryland. Gen. Braddock himself has indicated in his diary where these bowlders should be placed. Owens Ordinary was the site of his first encampment in Maryland, and we are very anxious to see this work carried on, and to Miss Gentry is due the credit of initiating the movement to make these old trails the national highway. [Applause.]

Mr. BORLAND. Mr. Chairman, I would like now to introduce one of the national officers of the Daughters of the American Revolution, Mrs. Clayton Read Truesdall, of Ohio.

Mr. LEVER. The committee will be glad to hear Mrs. Truesdall.

STATEMENT OF MRS CLAYTON TRUESDALL, OF OHIO.

Mrs. TRUESDALL. Mr. Chairman, gentlemen of the committee, and Daughters, I am sure that you realize to-day, from the number of women who are here, that we would not leave the very interesting sessions of the Twenty-first Congress of the Daughters of the American Revolution unless we desired very much that your attention and your favorable recommendations be given to this bill.

The plan for this national roadway has grown out of the interest of many of the States in the Union in the marking of the local trails in their States and in having better roads along such trails. In Ohio we are just beginning to mark the famous Harrison Trail, which runs from Frankinton—which is now Columbus—to Fort Clinton, which was the end of the road traversed by Gen. Harrison during the War of 1812. The monument there is just about to be unveiled; it was placed there by the Daughters of 1812 and the Daughters of the American Revolution, and another one on the farther side, marking the place where the first fort in what is now the State of Ohio, Fort Sandusky, was built in 1645, I believe. It is on account of this local interest that we are now wishing to undertake, and want your approval of, this greater road; so that we may have a consecutive road, a continuous road from one ocean to the other. We all remember, perhaps, that one of the greatest monuments to the Roman Empire was its splendid road system. In this country we have had our pioneer age; we have had our commercial age and our manufacturing age. Now we are at the point when we are able to take up our art and our literature; the day when we are marking historical sites in this country, from the north to the south, from the east to the west; and in passing this bill, and in marking these historic sites, we would not only be rearing a monument, as it were, to the memory of our ancestors and of those early pioneers, but we would be making a continuous road across the country and a monumental work for posterity. [Applause.]

Mr. BORLAND. Mr. Chairman, there has been handed to me in the last few minutes the following telegram:

Miss ELIZABETH B. GENTRY,
Chairman Old Trails Road Committee, D. A. R.,
Continental Memorial Hall, Washington, D. C.:

Old Trails Road convention assembled, 500 strong, in Kansas City; acknowledge greetings of the Daughters of the American Revolution Old Trails Road Committee in session at Washington, and again acknowledge our obligation to you for having been first in promoting what we believe and hope will shortly become the first great transcontinental highway over the historic and scenic route along the old trails of the pioneers.

WALTER WILLIAMS, *Chairman.*

Walter Williams, as our friends from Missouri well know, is the great historian of the old trail. He was recently the dean of the school of journalism in the University of Missouri, and an editor of national prominence; and he has devoted the rich fruits of a literary life to the preservation of this history of the West. He has written a great deal on that subject, all having a great deal of interest.

I take pleasure now in introducing the lady who, I believe, is the originator of this idea, Miss Elizabeth B. Gentry, of Kansas City, Mo.

Mr. LEVER. The committee will be pleased to hear from Miss Gentry.

STATEMENT OF MISS ELIZABETH BUTLER GENTRY, OF MISSOURI.

Miss GENTRY. Mr. Chairman and gentlemen of the committee, mothers and home makers have journeyed to this meeting from far and near to express the D. A. R. belief that a good road is for the welfare of women and children the country over. Is it not significant that women are here from the States of Washington, Colorado, Kansas, Missouri, Ohio, Pennsylvania, and Maryland to plead for good roads and a national historic highway across the continent, to plead for good roads generally, that children may go to school, women to church, and men to market at all seasons of the year?

A countrywoman said to me, "My men folks have left me stuck in the mud all my life. I am mighty thankful the D. A. R. are trying to pull me out." While individually we are concerned with this phase of good roads, as an organization we are dedicated to the historic and patriotic side, and are here to urge that a great national ocean-to-ocean highway be built as a memorial to the pioneer patriots of the Nation.

The telegram just read from Hon. Walter Williams, of Columbia, Mo., is a tribute to the D. A. R. for work already accomplished in Missouri, and for work under way in the "Trail States," as we term them; we are very proud to have the recognition of the National Old Trails Road Convention at Kansas City. The practical as well as the ideal value of this D. A. R. project is recognized in the Western States, and especially is it acknowledged by Gov. Herbert S. Hadley, of Missouri; Hon. Curtis Hill, highway engineer of Missouri; and the Missouri Board of Agriculture, who proclaimed the fact that it was due to the efforts of Mrs. John Van Brunt and her Santa Fe Trail committee that the State highway was located on the Boon's Lick Road and the Santa Fe Trail. Sentiment versus politics is building the Missouri link in the Old Trails Road; sentiment builds not only roads, it builds nations; it is the flower of civilization. [Applause.]

The old trails across the continent from the Atlantic to the Pacific were stamped out by nature's engineers—the buffalo, the elk, and the deer. Instinct led these animals to the ridge road, the direct road, the safest fords and mountain passes. These traces or trails were followed by the Indian and later by the pioneer, who blazed them and broadened them into wagon roads, over which traveled opportunity, civilization, religion, and romance—a pioneer trust company, that was the greatest developing influence between "civilization and sundown."

The historic old trails comprising this project are the George Washington Road, the old National Road or Cumberland Pike, the Boon's Lick Road, the Santa Fe Trail, Kearney's Road, the Oregon Trail. The several "Trail States" traversed by these pioneer trails are Virginia, Maryland, Pennsylvania, West Virginia, Indiana, Ohio, Illinois, Missouri, Kansas, Colorado, New Mexico, Arizona, California, Nebraska, Wyoming, Idaho, Oregon, and Washington. The Washington Road will be extended through Virginia, up through Washington, D. C., Baltimore, Philadelphia, and in to New York, drawing into the scheme the roads traversed by Gen. Washington on his several inaugurals as President of the United States.

A good road is a civilizing influence. It knits the interests of town and of country. It makes for better neighbors, better citizens, better

human beings. It makes for mutual welfare and happiness; it helps to conserve our greatest institution and most precious possession—the American home. Charles Sumner said that the two greatest forces for the advancement of civilization are the schoolmaster and good roads.

Missouri men, by the road-making power of hoof and of wheel, built a good road along this highway of nature half across the continent nearly a century ago. Missouri women of to-day have originated and organized a woman's national movement to reblaze these trails into modern roads by national aid. [Applause.]

There is a phrase, "See America first," which was very much scorned a decade ago, but the idea has sprouted in the light of to-day's nationalism. The Department of Commerce and Labor statistics show that $290,000,000 was left in Europe last year by American tourists. Switzerland is not an agricultural country, but is supported by its crop of tourists; that nation practically exists because Americans prefer the Alps to the Rockies. In natural grandeur and beauty of scenery Wyoming eclipses Switzerland. The Petrified Forest, the Painted Desert, the Seven Cities of Cibala are as interesting to antiquarians as is Egypt; the Grand Canyon of the Colorado, for its sublimity, is unparallelled in the whole world. A road of such wonders will be a national asset from an economic standpoint. To make the road truly national I suggest that it be typical of each State or section through which it passes; that State parks or preserves lie alongside where native animals, trees, shrubs, and grasses may be seen; that historic houses be preserved as State museums and objects of local history be therein collected; that the famous old taverns of coaching days be restored, so that the traveler may enjoy the hospitality typical of each section of the country. As at English inns the foreigner relishes the roast beef of Old England, and on the moors of Bonnie Scotland tea and hot buttered scones are enjoyed, never French pastry, so foreigners traveling over the National Highway of America will delight in the canvasback ducks and the oysters of Maryland, the beaten biscuit and fried chicken of Virginia, the Missouri apple, the Kansas corn, and the venison steaks of the Northwest. [Laughter and applause.]

A scenic and historic highway across our country will advertise America to foreigners. Instead of the annual egress of Americans to Europe we may look for a steady influx of Europeans to see the wonders of the New World—possible if this project be carried out.

The story of American expansion is the story of the old trails, the story of the pioneer. Missouri, the daughter of Kentucky and granddaughter of Virginia, became the mother of the West. She cradled sons who conquered desert, prairie, Indian, and wild beast. She nurtured sons who explored, colonized, and governed the West. No more daring, picturesque, nor romantic tale could be woven than the homespun histories of the intrepid heroes of Virginia and Missouri; of Washington, Gallatin, Clay, Jefferson, and Benton; of Pike, Becknell, Fremont, Gentry, Burnett, and Meeker; of Boone, Gist, Cresap, Bridger, Carson, Aubrey, and Cody; of Kearny, Doniphan, and Gilpin; and that great host of statesmen, explorers, scouts, soldiers; of trappers, voyageurs, mountain men, and Indian fighters; of wagon masters, homesteaders, gold seekers, and empire builders. [Applause.]

History has failed to record the pioneer women who braved the unknown wilderness or desert, succored their children and inspired their men, dauntlessly; who held the forts built by the men and made homes and planted the civilization of the frontier.

Men and women of to-day, with the blood of such heroic stuff coursing through your veins, build a national highway from ocean to ocean over these old trails as an enduring and fitting monument to the men and women of yesterday, the heroes of the Nation whose dauntless struggles left us the richest heritage in the world's history. Such a road is practicable for modern use and will conserve the welfare of the people living upon it. As a wagon road, dotted with historic shrines and taverns and sprinkled with traditions, Americans will tour this continent instead of Europe. [Applause.]

There are many projected roads at present; the Meridian Road, proposed to run from the Gulf to Canada, bisects our road at Kearney, Nebr., and also at McPherson, Kans.; another road is the capital-to-capital, or the Quebec-Miami Road, which intersects our road at Washington, D. C. The Natchez Trace is a feeder into our road, as is also the Chicago to St. Louis Road, to be called the "Lincoln Highway"; the river-to-river road across Iowa connects Chicago with our road again at Council Bluffs. All of these and many other roads will eventually be built for commercial advantage; but for educational, historic, and patriotic motives we urge that a distinctive scenic highway should be dedicated, built, and maintained by the National Government. We hope to see this road dedicated at the Panama-Pacific celebration at San Francisco in 1915.

While some Members may not have a direct interest in this project, it is logical to expect a sympathetic interest. In the nature of things one good road brings about another good road. I recognize the fact that principle collapses in the face of interest and that Arkansas, Montana, and Vermont may feel unrelated to this interest. At present, yes; but the example of the Government in building one good road at once will stimulate and react beneficially on all sections and road interests. Surely every State will take a patriotic pride and interest in a national highway which necessarily can not run through every State.

As Mr. Borland has already outlined to you the history of the trails in these particular States, I will tell a story that is suggestive of our feeling and attitude in this matter. At Hull House, in Chicago, not very long ago, there was a little play given by some children of the Ghetto, and the play was given in the patois of the Ghetto. The first scene was composed of two boys representing two soldiers of the Revolution, and one little soldier said to the other one: "My, ain't it fierce? This yere Revolution ain't got no flag;" and the other little soldier said, "Yes; ain't it fierce?" Then the curtain fell. The next scene is that soldier and Gen. Washington; and the soldier said: "General, ain't it fierce? This here Revolution ain't got no flag." And Gen. Washington said, "Yes; it is fierce"; and the curtain fell. And the third and last scene shows Gen. Washington and Betsey Ross. Gen. Washington says: "My, but ain't it fierce? This yere Revolution ain't got no flag" [laughter]; and Betsey Ross turned to Gen. Washington and said, "Here, George, you hold the baby, and I'll make a flag." [Applause and laughter.]

Now, instead of stitching a flag, we expect to spin and weave enough sentiment to build a national highway. If Betsey Ross could make a flag that was suitable to wave over our country for all time, we feel that we are equal to suggesting a road, equal to creating a public sentiment, and equal to stimulating the action that will result in a scenic and historic highway that will continue for all time, as Betsey Ross's flag will continue for all time.

I met a gentleman in Chicago not very long ago, who looked at me very quizzically when I told him of my interest in good roads and told him of this hearing before the Committee on Agriculture. I did not quite grasp it at first, because my interest and experience has been altogether in Missouri, where my family has lived for a hundred years and helped in founding the State. I realized in a few moments that he wanted to know whether my interests were in automobile tires or in road machines. I want to say very frankly to you that my interest and the interest of the Daughters of the American Revolution in the national highway is purely historic, purely sentimental and patriotic.

While our bill may have flaws and defects—I understand that there are 50 or more road bills before Congress, all of which, doubtless, have flaws in them—we urge that the historic interest of the Daughters of the American Revolution in the old trails road and the name of this organization be included in the consolidation bill; our interest is not a vague sentiment, but an insatiable passion. I believe that is what Senator Ingalls said of the Kansass people. It is representative of the Daughters of the American Revolution of the West and of the Daughters of the American Revolution of the East. No part of the country has a monopoly on history or a corner on patriotism. Our Pilgrim Fathers and our pioneer patriots alike stood for ideals. Paul Revere's ride over the Lexington road of a few miles has been chronicled in history; but a longer ride—and I shall not say a greater ride—was that of Marcus Whitman over the Oregon country across the continent. Each man, Paul Revere and Marcus Whitman, rode on horseback to warn the American Nation of British invasion; and while Paul Revere's ride called the Colonies to action, Marcus Whitman's ride called the Nation to action, and that great migration from the East, and particularly from this section of the country [indicating], to Oregon was the result; and the "Fifty-four-forty" country was saved to the Union.

There is another phase of good roads that we want to consider, and that is the betterment of country life. The highway has a social and political value as well as an economic value; it has an economic value to the farmer, and a social value to the farmer's family. A contented youth will not dwell in a quagmire. The Farmers' Union has been a negative force; and the farmers' wives are now organizing and demanding good roads as a means of protection against the wolves of isolation that devour both mind and body. The farmer's crop is not paramount to the farmer's soul.

Make the old trails road, the memorial road to the pioneer men and women, serve as a highway to the hearts and spirits of the American people. Let the D. A. R., who conceived and initiated this movement, bind with homespun cords the realized past to the ideal future of the Nation. The charm of the road is known to all travelers, whether it be by camel, stage coach, or motor car. The call

of the road to its lovers is as insistent a note as the call of the desert to the Arab, the call of the prairies to the westerner, or the call of the sea to the sailor.

In Samoa the natives have built a memorial road to Robert Louis Stevenson, which they call "The Road of Loving Hearts." Our plan also is to make a road of loving hearts; and it will have not only that interest, but will have commercial and economic value.

Poets have sung of the road in all ages and in all climes. The Greeks philosophized on roads, the Romans built roads, and the Americans neglect roads. [Applause.]

Walt Whitman writes of the road:

> Alone and light-hearted,
> I take to the open road.

Sam Waller Foss says:

> I'll build me a house by the side of the road,
> An be a friend to man.

The D. A. R. have built a house by the side of the road here in Washington; it is a white marble temple, where the fires of patriotism are kept burning. The D. A. R. interest in this highway is to perpetuate the pioneer history and to conserve the ideals of the Nation by building a national highway over the trails of the pioneer. [Applause.]

Mr. BORLAND. We are very greatly obliged to the gentlemen of this committee for their courtesy and attention. That completes the list of speakers, unless the members of the committee wish to ask some questions.

Mr. RUBEY. Mr. Chairman, I would like to say just a word, coming as I do from the State of Missouri, where this idea seems to have originated. In the summer of 1885, after I had driven from my part of Missouri a bunch of cattle into northern Missouri, I rode on horseback through the county of Saline to Arrow Rock, and the following day from Arrow Rock to Rocheport, and during those two days I was riding on this old trail, and I little dreamed at that time that a good many years later I would be in the Congress of the United States or that a matter of this kind would be before us.

I want to say that I am glad to be here and glad to see these ladies this morning with us advocating this measure. As one lady—I forget whom it was—expressed it so well, you have two great purposes in view: One, the marking of these great historic routes, and thus commemorating the historic deeds of those who, away back in those old days, through difficulties and dangers, first walked along those old trails; and the second, not only the doing of that which is patriotic and of doing that which is sacramental, but the establishing of those things which are useful as well and setting an example that may be followed in this great era of road building.

We are glad—at least I, for one, as a member of this committee, am glad—to have these ladies with us, and we appreciate the great and splendid efforts they are making in this line of work. [Applause.]

Mr. BORLAND. Mr. Chairman, we are richer in material here than we expected this morning, and if you have the patience I should be glad to call upon Mrs. James W. Endsley, the wife of a State senator of Pennsylvania, and a strong advocate of this movement.

Mr. LEVER. We should be very glad indeed to hear from Mrs. Endsley.

Mr. BORLAND. Before Mrs. Endsley speaks, however, I want to call attention to some pictures that we will leave with the committee, some photographs taken by the Daughters of the American Revolution and shown at the National Land Congress at Kansas City last fall or winter. They are reproductions in miniature of spots along the Santa Fe Trail and the Oregon Trail; and if you will look at these you will find them all of a great deal of interest; in their original cast they gave great delight to the people who went to the congress. You will see everything represented there, from Ezra Meeker's oxcart and the old stagecoach to the modern automobile; the entire history of transportation in the West is shown. And here is one of the most touching pictures, to my mind, that has ever been drawn. It is an advertisement merely now, and is called The Pioneers; but the ladies have called it by its true name, The Madonna of the Plains. It tells the whole story at a glance. Now, Mrs. Endsley, will you speak?

STATEMENT OF MRS. JAMES W. ENDSLEY, CHAIRMAN GOOD ROADS OF PENNSYLVANIA.

Mrs. ENDSLEY. Mr. Chairman and gentlemen of the committee, I am sorry that I did not know that I was to speak before you, for I am sure I could have said something that would have been of more interest than is now practicable; at least, I think I could, and it would have been more satisfactory. But I will say that we of Pennsylvania feel that this national highway will conform to the interest of the farmers; and, second, it will combine picturesqueness and practicality.

I think you all know that a great part of this road, at least, is the Old Braddock Trail, and it was an old Indian path, later known as the Monongahela Road; and that when the white people took the initiative—perhaps it was by the Ohio company, antedating the journey of Washington—they made a path for the settlers in the Southwest, and then later—you know the history of it and it is not worth while to repeat all this about Washington. But when the Government built this old Cumberland or National Pike, it followed in sections the exact route of this old Braddock Road. Then later, in 1835, it was taken over by the United States, and since then, for many years, this road has been in very bad repair. But now Pennsylvania has awakened and for some years has been doing her part to restore this grand old highway, which we hope to see a part of this ocean-to-ocean road—the Cumberland National Pike. Last year Pennsylvania appropriated $350,000—is not that correct, Mr. Crago?

Mr. CRAGO. Yes.

Mrs. ENDSLEY. $350,000 for the restoration of this road, and it will be completed from the Maryland line entirely through Monongahela County this summer, and in Fayette County, I think, it will be completed within the next year. That road is restored, and it conforms very nearly with the requirements which Mr. Borland has drawn up in his bill. I believe the macadam in the middle of the road is not quite so wide as 20 feet; but I think perhaps that can be arranged for.

This road runs through a most beautiful section of country. There can be no question at all about the picturesqueness of it. And far be it from me to say anything against the rearing of marble shafts in memory of Washington, or of any of our revered pioneers; but we could not possibly, it seems to me, raise a finer monument in any way than to establish this highway across the continent in memory of our pioneers; and I am quite sure that Pennsylvania will reach hands across the continent and clasp those of the men and women of the West, in doing her part and her share in this work. [Applause.]

Mr. LEVER. Representative Crago would like to say a word, and we would like to hear him.

STATEMENT OF REPRESENTATIVE THOMAS S. CRAGO.

Mr. CRAGO. Mr. Chairman and gentlemen of the committee, I would be very glad to talk along this line, because my heart and soul are in it; but I realize that the members of this committee like to get away as soon after 12 o'clock as possible when the House is in session; and these ladies have presented so well the patriotic side of this that I do not believe it will be necessary for anyone to touch upon that.

I have introduced a bill in this Congress, at the request of the historic society of Fayette County, known as the Braddock Memorial Association; and, along the line of the talk here to-day, I will say that the burial place of Braddock is along this proposed highway. It is along what we call the old Cumberland National Pike, which enters the State at Frostburg, Md., and crosses the counties of Somerset, Fayette, and Washington, leaving the State in the panhandle of West Virginia.

Now, we have the three trails through Pennsylvania, and searching out those trails where they have not been improved has been undertaken in the last few years. Dr. Albert Bushnell Hart, the historian of Harvard University, has made a particular study of this Cumberland Trail. This was the road laid out [indicating], and as I understand it, it is the nearest one to the Washington expedition trail and the Braddock Trail; and in addition to that, the Forbes Trail, north of this, has been attracting a great deal of attention; but it is not proposed, as I understand, by this bill to include that.

The State of Pennsylvania, as Mrs. Endsley said, appropriated $350,000 to be expended in one year on the National Pike. There is no question but that each year an additional appropriation will be made for that purpose, keeping this road separate and distinct from the other highways proposed to be built by the State. The State will also vote this year or next on a proposition to issue bonds to the sum of $50,000,000 for improving other highways than this; but each year the old National Road will be given its fair share of the appropriation.

As Mrs. Endsley said, the part of it through Pennsylvania is very historic in character. It is not the trail taken by Forbes in the early expedition; that, as I said, is north of this; but this was the artery from the East to the West, and through that territory; and you can notice the difference between the improvements along even a few miles of that highway and the conditions a few miles back from the highway all through Fayette and Washington Counties; there is a different atmosphere; there are different educational advantages; the people seem to settle close to that pike, as they call it.

And this subject is now controlled by the different counties, although the State has now taken up the matter of improving it. There was a time when the Government owned it; but it was turned over to the State, and afterwards by the State turned over to the counties. But the State is gradually taking back the control. And I want to say that, on the patriotic side of this, and the commercial side as well, the great State of Pennsylvania will be glad to join hands with the other States in this great movement, and I believe that if the necessary steps are taken here it will be a success. As I understand this bill, the first step in the movement would be a survey by the Government, which would lay out a general route to be followed by the States. After that it would be necessary for the States to act before there would be anything further to be done by the General Government, and I assure you that Pennsylvania will do her share. [Applause.]

Mr. BORLAND. In conclusion, now, Mr. Chairman, I desire to introduce Mrs. Corra Bacon-Foster, of Texas, who desires to extend an invitation to the committee.

STATEMENT OF MRS. CORRA BACON-FOSTER.

Mrs. BACON-FOSTER. Mr. Chairman and gentlemen of the committee, the most historic bit of road in America is without doubt that extending from Cumberland, Md., westward to the Monongahela River at Brownsville. That was the first trail to be surveyed by a company in America. It was surveyed by the Ohio Co. in 1749 and opened by that company for pack-horse trade. It was afterwards opened by Washington for his small wagon trains that he took out in his expedition to Fort Pitt, and then it was afterwards made a good wagon trail and a good military road by Braddock, and later it was repaired and kept in repair by the State of Virginia, and later became the National Pike, as you know. Washington was very much interested in that, and also the States of Maryland and Virginia, and they organized in 1784 the first company incorporated in America to improve an inland waterway and to make a road; they were to improve the Potomac River and to improve this road westward from Cumberland. That was the first incorporated enterprise of the kind in America. They worked for 50 years on the improvement of the Potomac River and built the first canals built in America and the first canal locks. George Washington was the first president of the company; Thomas Jefferson, of Maryland, the second president, and all the eminent men in these two States were connected with that company, the last president being John Mason, a son of George Mason, of Virginia.

The object of this little preamble, gentlemen, is to invite you tomorrow to a marking by a bronze tablet, by the ladies of the Daughters of the American Revolution Chapter in Fairfax County, of a historic spot at Great Falls. There were built there these beautiful stone locks, five of them, and the ruins are still there and are most impressive, I assure you, gentlemen. These ladies will be very glad, indeed, if the gentlemen of this committee and all of these ladies would honor them with their presence to-morrow afternoon at 3 o'clock, when they unveil this tablet to the memory of the Potomac

Co., the first company in America to be incorporated for the i
provement of an inland waterway and a roadway. I thank y
gentlemen. [Applause.]

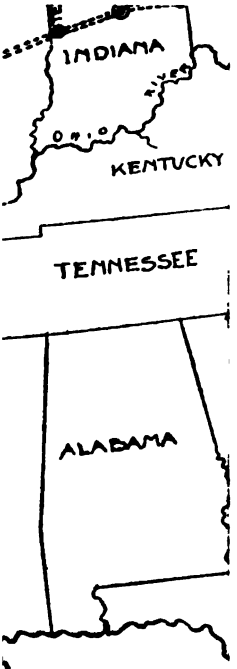
Mr. LEVER. On behalf of the committee, I desire to say that
thank you very much for your invitation, and we may have an
portunity to take advantage of it; and we will do so if we can sp
the time from our duties.

Mrs. BACON-FOSTER. You can take the car from the Aque
Bridge at half past 2; there will be a car provided.

Miss GENTRY. There is an album here filled with letters f
prominent men and women indorsing the movement. There are
a few pictures of markers in various States and some very interes
and picturesque old letters from some of the early pioneers; f
Ezra Meeker, and from Mr. Allen, of Olney, Ill., who introduce
bill in the Thirty-third Congress, asking that the National Roa
turned back to the States; and from the other old pioneers, includ
one from John B. Colton, the man who discovered Death Valley
California. Those are very picturesque and interesting pio
letters, and I should be very glad to have anyone look at them.

Mr. LEVER. Ladies, I desire to thank you for your presence h
this morning, and to thank Mr. Borland also on behalf of the c
mittee, and to say that you have given us the most interesting ses
we have had during the year; and we promise to give this bill v
serious and earnest consideration.

Thereupon, at 12 o'clock noon, the committee adjourned.



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VOCATIONAL EDUCATION.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Tuesday, April 23, 1912.

The committee met at 10.30 o'clock a. m., Hon. John Lamb (chairman) presiding.

There were present before the committee Hon. William B. Wilson, a Representative from the State of Pennsylvania; Mr. C. A. Prosser, secretary of the National Society for the Promotion of Industrial Education; Arthur E. Holder and J. D. Pierce, of the American Federation of Labor; Mr. H. J. Patterson, director of the Maryland Experiment Station and master of the State Grange of Maryland; Mrs. H. J. Patterson, chairman of the home economic committee of the National Grange; Miss Laura D. Gill, of Sewanee, Tenn, representing the General Federation of Women's Clubs; Dr. H. G. Williams, of Athens, Ohio, dean of the State Normal College of Ohio and chairman of the executive committee of the national committee on agricultural education; and Mr. Clarence J. Owens.

The CHAIRMAN. We have under consideration this morning H. R. 23581, introduced by Mr. Wilson. Is this bill 23581 the only bill you offer, Mr. Wilson?

Mr. WILSON. No; I have offered two other bills along the same line, but 23581 is a perfecting of the other two bills.

The CHAIRMAN. You have introduced 12156 and 21490 and then this one, 23581. I just want to get the record straight.

Mr. WILSON. 23581 is the last one which I have introduced, and it combines the ideas in the previous bills introduced.

[H. R. 23581, Sixty-second Congress, second session.]

A BILL To provide for cooperation with the States in promoting instruction in agriculture, the trades and industries, and home economics in secondary schools; in preparing teachers for these vocational subjects in State colleges of agriculture and the mechanic arts, in State normal schools, and in other training schools for teachers supported and controlled by the public; in maintaining extension departments of State colleges of agriculture and the mechanic arts; in maintaining branches of State experiment stations; and to appropriate money and regulate its expenditure.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

CONSTRUCTION.

That the following words and phrases, as hereafter used in this act, shall, unless a different meaning is plainly required by the context, have the following meanings:

First. "School of secondary grade" or "secondary school" or "high school" shall mean a school offering studies and courses of lower than college grade which are designed to provide vocational education for persons above fourteen

years of age; and which, by courses of training approved under the provisions of this act, give vocational instruction in all-day classes to those persons who are preparing for agricultural, industrial, or home-making occupations; or in part-time and continuation classes to persons engaged in or experienced in agricultural, industrial, or home-making vocations; or in evening classes to persons above sixteen years of age employed during the day in the respective vocations for which they are given instruction.

Second. "State college of agriculture and the mechanic arts" shall mean a college now receiving, or which may hereafter receive, the benefits of the act of Congress of July second, eighteen hundred and sixty-two, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts" and of acts supplementary thereto.

Third. "Agricultural extension department or division" shall mean a department or division which is established under the provisions of this act and under the direction of a State college of agriculture and the mechanic arts in any State, and which gives instruction and demonstrations in agriculture and home economics to persons not residing at said college nor at the district agricultural schools provided for in this act and which conveys or imparts to such persons information on such subjects through field demonstrations, publications, and otherwise.

Fourth. "Separate industrial or home-economics school" shall mean a school fitting for useful service in the trades and industries and the home and having a separate plant and equipment and separate organization of teachers and courses of study.

Fifth. "District agricultural high school" shall mean a separate agricultural school of secondary grade, in a district composed of a group of counties, and located on a farm.

Sixth. "Branch station" shall mean a branch of a State experiment station conducting field tests and breeding work and located on a district agricultural high-school farm.

APPROPRIATIONS.

SEC. 2. That the several sums as herein provided in section three to section ten, inclusive, be, and they are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, to be paid, as hereinafter provided, to the respective States and the District of Columbia and to the Federal departments named herein, for instruction in agriculture, the trades and industries and home economics, for agricultural tests and demonstrations, and for administrative purposes.

SEC. 3. That for the maintenance of instruction in agriculture, the trades and industries, and home economics in departments or divisions of schools of secondary grade, other than the separate industrial or home-economics schools and the separate district agricultural high schools for which provision is hereinafter made, the sum of three million dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and sixteen, such sum to be allotted annually to the States and the District of Columbia in proportion to their population as shown by the Federal census next preceding the year for which such allotment is made. The moneys appropriated under this section shall be known as the secondary-school department fund.

SEC. 4. That for the maintenance of instruction in the trades and industries, and home economics in separate industrial or home-economics schools of secondary grade, the sum of three million dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and sixteen, such sum to be allotted annually to the States and the District of Columbia in proportion to their population engaged in trades and transportation and in manufacturing and mechanical pursuits, as shown by the Federal census next preceding the year for which such allotment is made. The moneys appropriated under this section shall be known as the industrial or home economics school fund.

SEC. 5. That for the maintenance of instruction in agriculture and home economics in district agricultural high schools of secondary grade as hereinafter provided the sum of three million dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and sixteen, such sum to be allotted annually to the States in proportion to the number of persons engaged in agricultural pursuits, as shown by the Federal census next preceding the year for which such allotment is made; and for each State with less than one hundred thousand people engaged in agriculture, according to such Federal census, the

additional sum of five thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and sixteen, and annually thereafter. The moneys appropriated under this section shall be known as the district agricultural high-school fund.

SEC. 6. That for the maintenance of branch stations, as provided for in this act, the sum of one million dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and sixteen, to be allotted annually to the States in proportion to the number of persons engaged in agricultural pursuits, as shown by the Federal census next preceding the year for which such allotment is made; and for the maintenance of such branch stations in each State with less than one hundred thousand people engaged in agriculture, according to such Federal census, the additional sum of two thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and sixteen, and annually thereafter. The moneys appropriated under this section shall be known as the branch-station fund.

SEC. 7. That for the support in each State college of agriculture and the mechanic arts of an extension department or division the sum of four hundred and eighty thousand dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and thirteen, of which annual appropriation ten thousand dollars shall be allotted to each of the forty-eight States for the benefit of such extension departments; and for the maintenance of such extension departments the additional sum of four hundred thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and fourteen; the additional sum of seven hundred thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and fifteen; the additional sum of one million dollars for the fiscal year ending June thirtieth, nineteen hundred and sixteen; the additional sum of one million three hundred thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and seventeen; the additional sum of one million six hundred thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and eighteen; the additional sum of one million nine hundred thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and nineteen; the additional sum of two million two hundred thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and twenty; the additional sum of two million five hundred thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and twenty-one, and annually thereafter, these additional sums to be allotted annually to the States in proportion to their population engaged in agriculture, as shown by the Federal census next preceding the year for which such allotment is made. The moneys appropriated under this section shall be known as the extension-work fund.

SEC. 8. That for the preparation of teachers to give instruction in or closely related to agriculture, the trades and industries, and home economics in departments or divisions of education in the State colleges of agriculture and the mechanic arts of the respective States the sum of four hundred and eighty thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and thirteen, and annually thereafter, of which annual appropriation ten thousand dollars shall be allotted to each of the forty-eight States for the benefit of such departments or divisions of education. The moneys appropriated under this section shall be known as the college teachers' training fund.

SEC. 9. That for the preparation of teachers to give instruction in or closely related to agriculture, the trades and industries, and home economics in State normal schools and in other training schools for teachers the sum of one million dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and thirteen, to be allotted annually to the States and the District of Columbia in proportion to their population as shown by the Federal census next preceding the year for which such allotment is made; and, for such instruction as in this section is provided, in each State with less than three hundred thousand inhabitants the additional sum of three thousand dollars for the fiscal year ending June thirtieth, nineteen hundred and thirteen, and annually thereafter. The moneys appropriated under this section shall be known as the normal teachers' training fund.

SEC. 10. That the sum of forty thousand dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and thirteen, to be expended under the direction of the Secretary of the Interior in paying the necessary expenses of administering the provisions of this act relating to schools of secondary grade and to the preparation of teachers in agriculture, trades and

industries, and home economics; the sum of twenty thousand dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and thirteen, to be expended under the direction of the Secretary of Agriculture in paying the necessary expenses of administering the provisions of this act relating to extension departments or divisions and branch stations; the sum of fifteen thousand dollars annually, beginning with the fiscal year ending June thirtieth, nineteen hundred and thirteen, to be expended by the Secretary of Agriculture in paying the necessary expenses of giving advice and assistance, as herein provided, to the Secretary of the Interior in the administration of the provisions of this act relating to all schools of secondary grade giving training in agriculture and home economics, and to the preparation of teachers in these vocations; the sum of fifteen thousand dollars annually, beginning with the fiscal year ending June thirtieth, ninteen hundred and thirteen, to be expended under the direction of the Secretary of Commerce and Labor in paying the necessary expenses of giving advice and assistance, as herein provided, to the Secretary of the Interior in the administration of the provisions of this act relating to instruction in the trades and industries and to the preparation of teachers for these vocations. The moneys appropriated under this section shall be known as the administration fund.

SEC. 11. That the Secretary of the Interior is hereby charged with the duty and to him is hereby given all necessary power to administer the provisions of this act relating to all schools of secondary grade and to the preparation of teachers in agriculture, the trades and industries, and home economics as herein provided; to secure advice and assistance from the Secretary of Agriculture and the Secretary of Commerce and Labor in carrying out the provisions of this act in the making of investigations concerning education in the industries, household arts, and agriculture, and in the making of reports thereon; to cooperate with the State boards for vocational education, herein provided for the respective States and the District of Columbia, in developing the work of such secondary schools and in the training of such teachers; and to give to such board for vocational education such advice and assistance as will best enable them to carry out the provisions of this act.

SEC. 12. That the Secretary of Agriculture is hereby charged with the duty and to him is hereby given all necessary power to administer the provisions of this act relating to extension departments and branch stations; to make investigations and studies relating to the work of such departments and branch stations, and to issue reports thereon; to cooperate with the authorities of the State colleges of agriculture and the mechanic arts and the State experiment stations in developing the work of such departments and branch stations and in giving such State experiment stations such advice and assistance as will best enable them to carry out the provisions of this act; and to aid the Secretary of the Interior by giving advice and assistance to him in carrying out the provisions of this act relating to instruction in agriculture and home economics in schools of secondary grade and to the preparation of teachers for these vocations, and by making such investigations in agriculture and home economics and such reports thereon as may be necessary in discharging this responsibility.

SEC. 13. That the Secretary of Commerce and Labor is hereby charged with the duty and to him is hereby given all necessary power to aid the Secretary of the Interior by giving advice and assistance to him in carrying out the provisions of this act relating to instruction in the trades and industries in schools of secondary grade and to the preparation of teachers for these vocations, and by making investigations in the trades and industries and issuing reports thereon.

SEC. 14. That in order to secure the benefits of any fund provided for in this act any State shall, through the legislative authority thereof, accept the provisions of this act relating to such fund, and shall appoint the State treasurer custodian, to be known as custodian for vocational education, for all moneys received by such State under this act, and shall provide for the proper custody, administration, and disbursement of such moneys, as herein provided; and the District of Columbia shall, through the commissioners thereof, accept the provisions of this act, and shall appoint a custodian of all the moneys received by the District of Columbia under this act, to be known as custodian for vocational education, and shall provide for the proper custody, administration, and disbursement of such moneys. Any State or the District of Columbia may accept the benefit of any one or more of the respective funds herein appropriated to it, and may defer the acceptance of the benefit of any one or more of

such funds, and shall be required to meet only the conditions imposed in relation to those funds the benefit of which it has accepted.

SEC. 15. That no State or the District of Columbia shall be entitled to the benefit of the secondary-school department fund, the industrial or home-economic school fund, the district agricultural high-school fund, the college teachers' training fund, or the normal teachers' training fund until the legislative authority thereof shall, by law, have created or designated a board of control, to be known as the board for vocational education, consisting of not less than three members and having all necessary power to cooperate with the Secretary of the Interior in the administration of the provisions of this act relating to such schools of secondary grade and to such training of teachers, and such a board for vocational education for any State or the District of Columbia may consist of the board of education or other body having charge of the administration of public education therein.

SEC. 16. That no State shall be entitled to the benefit of the district agricultural high school fund until it has, through the legislative authority thereof, divided the State into districts, providing in each district for one district agricultural high school and in connection therewith a branch station, the total number of such districts and branch stations in a given State to be not less than one for each fifteen counties nor more than one for each five counties and fraction of five counties; and in any State where separate district agricultural high schools are provided for the negro race the legislative authority of such State may divide the entire State into districts, providing in each district for one such school for the white race, and may divide the entire State into other and different districts, which need not be coterminous with those for the white race, providing in each such district for one school for the negro race; but the total number of such schools for the white and the negro races in such a State shall not be less than one for each fifteen counties nor more than one for each five counties or fraction of five counties. Any district agricultural high school shall be open to admission without tuition charges and upon the same conditions to all persons, otherwise qualified as herein provided, residing in the district in which such school is located, but such school may be supported and controlled by the State or by the district in which it is located or by a portion thereof.

SEC. 17. That no State shall be entitled to the benefit of the branch station fund until its legislative authority shall, by law, have provided for one branch station in connection with each district agricultural high school receiving funds under this act, and shall have provided, as an appropriation for the annual maintenance of such branch stations, a sum at least equal to that allotted annually for this purpose to the State under this act; and the sum paid to each State for branch stations shall be applied only to paying the necessary expenses of conducting, by such branch stations, field tests, plant breeding, and other scientific work bearing directly on the occupation of agriculture in the United States, having due regard for the varying conditions and needs of the respective States.

SEC. 18. That no State shall be entitled to any part or all of its allotment for extension department work until its legislative authority shall, by law, provide for the establishment of an extension department or division in the State college of agriculture and the mechanic arts as herein provided, and shall have provided as an appropriation for that work an amount at least equal to the amount annually allotted to the State for such extension work under this act.

SEC. 19. That in order to secure the benefit of the secondary school department fund, the industrial or home economics school fund, the district agricultural school fund, the college teachers' training fund, or the normal teachers' training fund the board for vocational education for each State and the District of Columbia shall adopt, with the approval of the Secretary of the Interior, and place in operation a general administrative scheme or plan, with such modifications as may be made from time to time, for the proper distribution of moneys to schools of secondary grade and to colleges and normal schools as herein provided, for the inspection and approval of such schools and colleges under the provisions of this act, and for the formulation and application in such inspection and approval of standards and requirements in vocational education as to types of schools, location, course of study, qualifications of teachers, methods of instruction, conditions of admission, and employment of pupils.

In order that such a plan may be adapted to the needs of the State, or the District of Columbia, in which it is to become operative the Secretary of the

Interior shall, in passing upon it and its modifications from time to time, take into consideration the social, economic, industrial, educational, and administrative conditions and all other relevant circumstances in such a State or the District of Columbia. It shall be the duty of such board for vocational education for any State or the District of Columbia to make annually to the Secretary of the Interior a full and detailed report of its administration of the provisions of this act relating to all such schools of secondary grade and to the training of teachers in colleges and normal schools, as herein provided, and to make such additional statements and reports as may be required by the Secretary of the Interior in the discharge of his responsibility under this act.

SEC. 20. That it shall be the duty of the board of trustees or other authority having charge of any State college of agriculture and the mechanic arts receiving the benefit of the extension-work fund to administer the provisions of this act relating to such extension work, under general plans approved by the Secretary of Agriculture; to cooperate with the Secretary of Agriculture in the development of such work; to make to the Secretary of Agriculture a full and detailed report of its operations in the direction of extension work as defined in this act, including a detailed statement of receipts and expenditures from all sources for this purpose, and to make such additional statements and reports as may be required by the Secretary of Agriculture in the discharge of his responsibility for such extension work under this act.

SEC. 21. That it shall be the duty of the board of trustees or other authority having charge of any State experiment station receiving the benefit of the branch-station fund to administer the branch-station work herein provided in accordance with the provisions of this act and as a part of such State experiment station, under general plans approved by the Secretary of Agriculture; to cooperate with the Secretary of Agriculture in the development of the work of such branch stations; to make to the Secretary of Agriculture a full and detailed report of all its operations in branch-station work as defined in this act, including a detailed statement of receipts and expenditures from all sources for this purpose, and to make such additional statements and reports as may be required by the Secretary of Agriculture in the discharge of his responsibility for such branch stations under this act.

SEC. 22. That any school of secondary grade or school or college for the preparation of teachers in agriculture, the trades and industries, and home economics, receiving funds under this act in any State or the District of Columbia shall, in order to receive the benefit of this act, conform to the requirements of the board for vocational education of such State or the District of Columbia; shall cooperate with such board in the development of the work of such school or college as herein provided; shall make to the board for vocational education of such State or the District of Columbia a full and detailed report of its operations in the administration of the funds received by it under this act, including a detailed statement of receipts and expenditures from all sources for this purpose; and shall make such additional statements and reports as may be required by such board for vocational education in the discharge of its responsibility for such school under this act.

SEC. 23. That in order that any State or the District of Columbia may receive the benefit of the secondary-school department fund, the industrial and home-economics school fund, the district agricultural high-school fund, the college teachers' training fund, or the normal teachers' training fund, under this act, it shall be the duty of the custodian for vocational education of such State or the District of Columbia, as herein provided, to make annually to the board for vocational education of such State or the District of Columbia, a full and detailed report of his administration of the moneys received by him from such fund, as herein provided; and in order that any State may receive the benefit of the extension-work fund or the branch-station fund, under this act, it shall be the duty of such custodian to make annually to the Secretary of Agriculture a full and detailed report of his administration of the moneys received by him from such fund as herein provided, and to make from time to time such additional statements and reports relating to moneys received by him from the secondary-school department fund, the industrial and household arts school fund, the district agricultural high-school fund, the college teachers' training fund, or the normal teachers' training fund, as may be required by such board for vocational education, and such additional statements and reports relating to moneys received by him from the extension-work fund or the branch-station fund as may be required by the Secretary of Agriculture, in the discharge of their respective responsibilities under this act.

SUPPORT.

SEC. 24. That the Secretary of the Interior shall annually, upon the basis of the annual reports and recommendations made by the board for vocational education for any State or the District of Columbia, together with such other additional investigations as he may make in the discharge of his responsibility, ascertain whether such State or the District of Columbia is using the moneys received by it out of the secondary-school department fund, the industrial or home-economics school fund, the district agricultural high-school fund, the college teachers' training fund, or the normal teachers' training fund, in accordance with the terms of this act. On or before the first day of July in each year after this act becomes operative he shall certify to the Secretary of the Treasury, as to each State or the District of Columbia, whether it has complied with the provisions of this act and is entitled to receive its share of such fund, as herein provided, for such State or the District of Columbia, and the amounts from such fund which each State or the District of Columbia is entitled to receive. Upon the certification of the Secretary of the Interior, as herein provided, the Secretary of the Treasury shall pay quarterly, in advance, to the custodian for vocational education of such State or the District of Columbia the moneys to which it is entitled for such schools under this act. Upon the requisition of the board for vocational education of such State or the District of Columbia, such custodian shall pay to the governing board of any school of secondary grade, or school or college preparing teachers in agriculture, the trades and industries, and home economics, or other authority legally qualified to receive moneys for such school or college, the sum which it is entitled to receive under the provisions of this act.

SEC. 25. That the Secretary of Agriculture shall annually ascertain, through investigations and reports, whether the States receiving the benefit of the extension-work fund or the branch-station fund, under the provisions of this act, are using the funds granted to them in accordance with the terms of this act. On or before the first day of July in each year after this act becomes operative he shall certify to the Secretary of the Treasury, as to each State, whether it has complied with the provisions of this act and is entitled to receive its share of such extension-work fund or such branch-station fund herein provided for such State, and the amounts which each State is entitled to receive from such fund. Upon the certification of the Secretary of Agriculture herein provided, the Secretary of the Treasury shall pay quarterly, in advance, to the custodian for vocational education of such State the moneys to which such State is entitled for extension departments and branch stations under this act. Upon the requisition of the board of trustees or other board of control of any State college of agriculture and the mechanic arts or of any State experiment station of any State, such custodian shall pay to the treasurer or other officer duly appointed by such board of control the moneys to which such college or State experiment station is entitled under the provisions of this act.

SEC. 26. That the secondary-school department fund shall be used only for distinctive studies in or closely relating to agriculture, the trades and industries, and home economics; the idustrial or home-economics school fund shall be used only for distinctive studies in or closely relating to the trades and industries and home economics; the district agricultural school fund of secondary grade shall be used only for distinctive studies in or closely relating to agriculture and home economics; the college teachers' training fund shall be used only by departments or divisions of education in these colleges and only in the preparation of teachers to give practical or technical instruction fitting for useful service in agriculture, the trades and industries, or the home; the normal teachers' training fund shall be used only for distinctive studies which are given in separate units organized as departments or divisions of State normal schools or other training schools under a properly qualified head, and which are designed to prepare teachers to give practical or technical instruction fitting for useful service in agriculture, the trades and industries, or home economics; the extension-work fund shall be used only for instruction and demonstrations in agriculture, home economics, and rural affairs; and the branch-station fund shall be used only for field tests, plant breeding, animal breeding, home economics, and other scientific work under plans approved by the directors of the State experiment stations of the respective States.

SEC. 27. That if any portion of the moneys received by the custodian for vocational education of any State or the District of Columbia under this act, for any

given purpose named in this act, shall by any action or contingency be diminished, lost, or misapplied, it shall be replaced by such State or the District of Columbia, and until it is so replaced no subsequent appropriation for such purpose shall be paid to such State; no portion of any moneys appropriated under this act for the benefit of the States or the District of Columbia shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building or buildings, or equipment, to the purchase or rental of lands; and no portion of such moneys shall be expended other than in institutions supported and controlled by the public.

SEC. 28. That whenever it shall appear to the Secretary of the Interior from the annual statement of receipts and expenditures of the custodian for vocational education of any State or the District of Columbia that a portion of the preceding annual disbursement made to such State or the District of Columbia from the secondary-school department fund, the industrial or home-economics school fund, the District agricultural high-school fund, the college teachers' training fund, or the normal teachers' training fund remains unexpended, a sum equal to such portion or amount shall be deducted by him from the next succeeding annual disbursement from such fund to such State or the District of Columbia; and whenever it shall appear to the Secretary of Agriculture from the annual statement of receipts and expenditures of the custodian for vocational education of any State or the District of Columbia that a portion of the preceding disbursement made to such State or the District of Columbia from the extension-work fund or the branch-station fund remains unexpended, a sum equal to such portion shall be deducted by him from the next succeeding annual disbursement from such fund to such State or the District of Columbia, in order that the amount of money distributed to any State or the District of Columbia from any fund provided for in this act shall not exceed the amount actually and necessarily required by the State for the purpose for which such money from such fund may be expended under the provisions of this act.

SEC. 29. That each State and the District of Columbia shall receive for the respective purposes herein provided only such portion of the full amount of any fund to which such State or the District of Columbia would otherwise be entitled as in the judgment of the Secretary of the Interior of the Secretary of Agriculture, in the discharge of their respective responsibilities under this act, it has made ample preparations to use to advantage. And all such moneys as would otherwise be allotted to the respective States and the District of Columbia but as are not so allotted by the Secretary of the Interior or the Secretary of Agriculture shall remain in the Treasury.

SEC. 30. That the Secretary of the Interior may withhold a certificate from any State or the District of Columbia for the whole or any part of its annual allotment of money for schools of secondary grade, or for the training of teachers in agriculture, the trades and industries, and home economics, to which he decides it not to be entitled under the provisions of this act; and the Secretary of Agriculture may withhold a certificate from any State for the whole or any part of its annual allotment for extension departments or branch stations to which he decides it not to be entitled under the provisions of this act. If the Secretary of the Interior or the Secretary of Agriculture, as herein provided, shall withhold a certificate from any State or the District of Columbia for the whole or any part of its allotment, the facts and reasons therefor shall be reported to the President, in order that the State or the District of Columbia may, if it shall so desire appeal to the President from the determination of the Secretary of the Interior or the Secretary of Agriculture. If the President shall not direct such sum to be paid, it shall be covered into the Treasury.

SEC. 31. That the moneys received by any State or the District of Columbia for any given purpose under the provisions of this act shall be used only for such purpose, and shall be distributed among the institutions entitled to the benefit of such moneys in proportion to the amount which each expends out of other income derived from general or from local public funds for the same purpose during the same period; or such money shall be distributed on some other basis and according to some other plan previously adopted by the board for vocational education or by legislative authority for such State or the District of Columbia, with the approval of the Secretary of the Interior; but there shall in no case be disbursed under the terms of this act to any school, college, or experiment station for any purpose provided for in this act more money than is supplied and expended during the same period for the same purposes out of such State or local public funds.

SEC. 32. That all States, Territories, and the District of Columbia accepting the benefit of any fund under this act shall provide other moneys with which to pay the cost of providing the necessary lands and buildings and to pay the entire cost of all instruction, supplementary to the practical and technical instruction provided for in this act, necessary in order to complete well-rounded courses of training the main purposes of which are to give vocational as well as general preparation for agriculture, the trades and industries, and home making, or to prepare teachers for these vocations, suited to the needs of the respective sections and communities of the United States.

SEC. 33. That all printed matter and correspondence for the furtherance of extension work, as provided for in this act, issued from the State colleges of agriculture and the mechanics receiving the benefits of this act shall be transmitted in the mails of the United States and dependencies free of charge for postage, under such regulations as the Postmaster General may from time to time prescribe.

SEC. 34. That the Secretary of the Interior shall make an annual report to Congress on his administration of the secondary-school department fund, the industrial and household arts school fund, the district agricultural high-school fund, the college teachers' training fund, and the normal teachers' training fund under the provisions of this act, and on the work of the boards for vocational education of each State and the District of Columbia in their administration of the moneys received from such funds under the provisions of this act; and he shall make one or more reports to Congress, not later than June thirtieth, nineteen hundred and fifteen, concerning the organization of vocational education as provided for in this act.

SEC. 35. That the Secretary of Agriculture shall make an annual report to Congress on his administration of the extension-department fund and the branch-station fund, and on the work of the boards of control of the colleges and experiment stations in their administration of the moneys received by them from such funds under the provisions of this act.

SEC. 36. That this act shall take effect immediately on its passage.

The CHAIRMAN. I wish you would please take charge of the hearing and introduce your speakers in the order in which you wish to have them talk.

STATEMENT OF HON. WILLIAM B. WILSON, A REPRESENTATIVE IN CONGRESS FROM THE FIFTEENTH DISTRICT OF PENNSYLVANIA.

Mr. WILSON. Well, Mr. Chairman, in speaking for this bill I will not undertake to deal personally with the details of it, but will leave to Mr. Prosser, who is familiar with it, and with others who are to follow me.

Our public-school system is the best system of instruction that the world has as yet produced. Its value depends not entirely upon the information of the rudiments which are conveyed to the pupils, but to a greater extent upon the fact that it develops the ability of the pupil to think. One of the difficulties with our present school system, and one of the things that is a weakness in it, is the fact that after we pass the grammar grades our entire system of education tends toward preparation for the professions and for clerical work. In the natural order of events there can only be a limited number of our people who can engage or be utilized in the professions and in clerical work. The vast body of our people must of necessity be engaged in agriculture and industrial pursuits. Our system of education generally has not provided any method by which the young mind can be taught and the young hand can be taught how to proceed to the best advantage in agriculture and in the industries. The commercial supremacy of any nation is not so much dependent

upon the cheapness of its labor as it is dependent upon the efficiency of its labor; and one of the purposes, and the principal purpose, of this bill is to make our labor in agriculture, in the industries, and in home economics more efficient than it has been in the past, and it proposes Federal aid for that purpose. The Federal Government has pursued to a limited extent the policy of assisting in developing the best methods of production, the best methods of safety, and similar lines. This bill simply proposes to extend that line of work and line of investigation so that it will apply to agriculture, which is the basis of all; to home economics, which is closely connected and identified with us all; and to the industries, upon which in a great measure our progress depends. Now, Mr. Chairman, I have no desire to take up your time in a discussion of this bill in its details, and will call upon Mr. Prosser to make a more detailed discussion of it.

The CHAIRMAN. We will be glad to hear from Mr. Prosser.

STATEMENT OF MR. C. A. PROSSER, SECRETARY OF THE NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

Mr. PROSSER. Mr. Chairman and gentlemen of the committee, I represent as its secretary the National Society for the Promotion of Industrial Education. That society numbers in its membership representatives of all of the trades-unions of this country and representatives of all the prominent manufacturers and prominent manufacturing associations of this country. In a sense this National Society for the Promotion of Industrial Education is sort of a clearing house between capital and labor, and the one great question upon which it seems that they are now absolutely in accord is the idea of promoting industrial, home economic, and agricultural education for the boys and girls of the towns, cities, and country places. They stand on the one common platform that such education should be promoted and that public aid for such education at the present time is absolutely necessary.

I shall not take up very much of your time in arguing for the general spirit and purpose of this measure. I would like to call the attention of the committee to an article in the February number of Scribner's Magazine, entitled "The passing of the untrained in Germany." That article is by Elmore Roberts, and is the best statement of what Germany is trying to do in the way of practical education that I have ever seen come from the pen of either an educator or a layman. Mr. Roberts is a newspaper correspondent. He points out in that article that the Germans claim that within 10 years, by their system of national aid for industrial education, there will not be in the confines of the Empire any such thing as an untrained man for his work. And so absolutely certain are they that they will achieve this highly desirable result that the word has already gone forth that the manufacturers of Germany are for the future not to employ one single man not German born in a skilled occupation within that great country.

The United States is to fight its battles with foreign nations in the future not with battleships, but with products. Thus far we have contented ourselves with sending out to the world very largely raw material, or practically raw material, that does not represent very

much skill in its preparation, such as flour, ore, and coal. Seventy-five per cent of the things with which we load foreign ships are things that have really come from the soil to deteriorate it. The American workman is the most intelligent workman in the world to-day, but the growth of machinery has made it more and more necessary to have his intelligence trained to the highest possible point, and Federal aid is needed for the purpose of encouraging and stimulating the States in providing for the future the right kind of training for our boys and girls in towns, cities, and country place. Now, there are several very brief arguments that I want to make in answer to the question that is so often raised, "Why do you need Federal aid for this movement?" If we leave it to 48 States to advance the work individually we will not secure what we need in the way of trained workers, both for the sake of the trained worker and for the sake of the prosperity of this country, until it is too late—until Germany, France, and England, who are working this problem out, very largely through Federal aid, have captured the markets of the world and rendered our task almost impossible. The second reason why we should have Federal aid is because the States are unable to carry forward this work properly without Federal aid. They are heavily burdened with the work of general education, with the general training of boys and girls up to 14 years of age in their high schools and colleges, and most of that training has a professional career in view.

These are worthy ends, but they are neglecting the training of boys and girls who are at the present time going out entirely untrained at the age of about 14 years to find their way into ordinary occupations. The third reason is, if the National Government will go on record as saying, "We are in favor of vocational education and we are manifesting that favorable attitude by a substantial appropriation," that fact, even though it is small, will at once produce a great impetus in this work on the part of the States. A gentleman said to me the other day, "I wish that the insular possessions might be included within the provisions of this bill that is to be considered and decided here, because the island possessions to-day believe that the education we have in the United States is that which fits for the college and professional career, what we call the white-shirt occupations; and if the National Government were to go on record in favor of practical training for life as a necessary and laudable end it would at once have an immense effect upon the kind of training that the people of the islands would favor." So to have the National Government go on record as being in favor of vocational education would have its effect in every nook and corner of this country. There are people still who believe that it is not the purpose of the Government to fit a man to work effectively with his hands, but it is the purpose of public money to fit a man to follow a professional career. This movement has the indorsement of practically every commercial organization and every labor organization in this country, and the indorsement of it would at once meet with their approval. The fourth reason is, and one which appeals to me very strongly, that it will dignify labor as it has never been dignified in this country.

The National Government going on record as being in favor of practical training as regarding skill and educational training in different trades and occupations of this country, so necessary and so desirable, and public money through the schools should be used for this

purpose would at once cause our school boys all over the country to look upon this idea of working their way up through the industries by toiling with their hands with a favor that they never have had in the past. The fifth and last reason, and this is the common platform today upon which capital and labor stand—the American Federation of Labor, the National Metal Trades Association, the National Association of Manufacturers, the National Association for the Promotion of Industrial Education come to this committee and say, "Give us this bill or at least some bill like it, because we need it." We have gotten together on this one common platform for the sake of the future of our workers and for the sake of the future of our industries and the prosperity of our country.

With that extended introduction I would like to address myself for a short time to an explanation of the terms of this bill. Section 1 sets up two definitions under the head of "Construction," first, "School of secondary grade" or "secondary school" or "high school," and second, "State colleges of agriculture and the mechanic arts," and it says that these terms as used in the bill shall have certain meanings. I do not believe that under that head I care to address myself to but one point, and that is this: The bill provides a total of $6,000,000 under two heads, for instruction in agriculture, the trades and industries and home economics in departments or divisions of schools of secondary grade, other than the separate industrial or home economic schools and the separate district agricultural high schools, and also for instruction in the trades and industries and home economics in separate industrial or home economic schools of secondary grade, $3,000,000 to be used in the departments or divisions of schools, and $3,000,000 to be used in the separate industrial or home economic schools.

I want to call your attention to the fact that under the definitions set out it will be possible to spend that money in three different kind of schools—the all-day school taking boys and girls of 14 and 16 years of age that go out to meet the demands of trade, the part-time school that reaches the worker after he commences to work at an earning occupation and brings him back for the purpose of giving him additional instruction that will not only make for better workmanship but for better citizenship, and the evening school that takes hold of the worker who is already employed in occupation and brings him back to school to show him the next step forward. These schools cover all day, part time, or evening only. Where it is not possible to attend the day school, the evening school supplies the proper training for the girl in home economics. May I say this here? Statistics show that the typical factory girl spends her time between 14 and 20 years of age in the factory, not all day, but on the average nearly all day, and that she spends the time between 20 and 60 in a home of her own. One of the great problems we have to face in this era of the great cost of living, the cost of high living, as it is sometimes called, is to show that girl how she can take the money of the man she marries and spend it the most effectively in that home. Now, this bill looks after the training of that girl between the ages of 14 and 18 years, and it is not possible or practicable for the girl in the shop or factory to get training for the home in schools except through Federal aid. At the same time it follows that the girl in the factory, if she goes out, driven

by economic necessity, would come back to the school later, and we will give you an example of what has been done in this matter of home training in Boston.

Sixteen concerns have entered into an agreement there for the home training of girls for a period of five hours a week. They go into a model apartment, where they are taught how to carry on a home properly, and at the same time they are given a course with regard to first aid to the injured, sexual hygiene, and all those other things that devolve upon them in the neighborhood of 20 years of age. If these girls are not able to get that instruction either in the all-day school or part-time school, this bill makes it possible to follow that girl after she becomes 16 years of age. If she can not come back for a time, to follow her with the evening school of instruction, and if she has become a wife and mother to make it possible for her to come back to this school and fit herself better for the task of caring for her home.

It is also possible, although this may be a problem for the day school, for the boy in the country to avail himself of agricultural instruction. During the winter season he gets his actual practice on the home farm under the instruction at the schoolhouse at public expense.

Finally, this bill makes it possible in villages that are rather close to the country proper where farming is carried on for evening instruction to be given, and to bring the boys back into the evening school for the purpose of giving them more of the science of agriculture that will enable them to make two blades of grass grow where only one grew before.

Following that, the sections from the second to the tenth, inclusive, take up specific appropriations for different things. I do not know that I need to go over that. The bill provides $3,000,000 for instruction in agriculture, the trades and industries, and home economics in departments or divisions of schools of secondary grade.

Section 4 provides $3,000,000 for instruction in the trades and industries and home economics in separate industrial and home economic schools.

Section 5 provides $3,000,000, for instruction in district agricultural high schools, by the side of each of which there is to be located a branch station for training in agriculture and home economics.

Section 6 provides $1,000,000 for the branch station work.

Section 7 provides for the extension department work an amount beginning at about half a million dollars and running up to practically three million, two or three hundred thousand dollars.

This bill in a sense represents an incorporation of the Lever bill, put forward by Mr. Lever, who is a member of this committee, and the Page bill in its original form. The language of the bill providing for extension work is practically the language in almost every place, the exact language of the Lever bill providing for extension department work. So in a sense this bill as introduced by Mr. Wilson is an attempt to solve the difficult obstacles found in the Page bill and the Lever bill.

There is a matter of practically half a million dollars for the training of teachers in agiculture, mechanic arts and industries, and home economics in the departments of the various State colleges of agriculture. There is a provision of a million dollars for the training of teachers in departments or divisions of State normal schools and

other training schools supported by public funds. There is a provision of $40,000 to the Secretary of the Interior for the administration of this act, or so much of this act as relates to secondary schools and the preparation of teachers in agriculture, the trades and industries, and home economics. There is a provision of $20,000 to the Secretary of Agriculture for the administration of extension work in branch stations, and the Secretary of Agriculture is to advise and assist the Secretary of the Interior in dealing with this problem of secondary schools and the training of teachers. There is a provision of $15,000 to the Secretary of the Department of Commerce and Labor, who is charged with the duty of giving advice and assistance to the Secretary of the Interior in administering the provisions of this act relative to these secondary schools and the training of teachers.

Mr. LEVER. What do you propose to do about these branch stations? Are they to be in the nature of the present experiment stations of the Department of Agriculture?

Mr. PROSSER. I would be very glad to answer that question if I could, but, frankly, I can not. I might say this to you: That this bill represents the very best authority and the very best thought that could be procured at the present time in the effort to get everybody together on some measure for submission to this committee. We are in favor of the general spirit and purpose of this bill. We believe in Federal aid for vocational education. The matter of the specific provisions and wording of the bill or inclusion of certain items is not of so much interest to us as is the general proposition of Federal aid. Undoubtedly a great many people of this country do believe that the work of the branch station would be carried on more suitably under this arrangement than it is now carried on. I think the majority of those people believe that the branch-station work should be located at these district schools while this district agricultural school work is carried on. This work, carried on by the side of it, would give an opportunnity to these boys and girls to develop their ideas by practical tests, and I think it was with that idea in view that the friend of that particular project came forward and said, "We must arrange for these branch stations and provide that they be located at the district school." The question, it seems to me, is whether Congress wants to provide these different branch stations in the States; second, whether the stations should be located at a district school, as provided in the measure. These are questions of detail, and it seems to me the entire question should be considered irrespective of that. I am not an agriculturist myself and I have had no experience with branch-station work, but I have no doubt there are men in this audience who could speak on that question, and I would prefer to have them do so.

Mr. LEVER. Would not the main purpose of the branch stations—would they not largely do the work of the present experiment stations of the United States?

Mr. PROSSER. I should judge that the intent of this bill was that these branch stations should be under the management of the State experiment station. It would probably be in the interests of economy to have the branch stations carry on their work closer to the farmer. The branch station is a branch laboratory in a sense.

Mr. LEVER. I do not mean the experiment stations, but only the research work, and it might not be necessary to have a duplication of some of the work going on in several States. The result of that would be that two experiment stations would be carried through the various districts of the United States.

Mr. PROSSER. This bill says, on page 3:

Branch station shall mean a branch of a State experiment station conducting field tests and breeding work and located on a district agricultural high-school farm.

That is the limitation of it.

Mr. Chairman, I would like next to address myself to the question of administrative features. The bill sets up this form of procedure. It squarely divides the extension work and branch-station work on the one hand, and all the rest of this work—the training of boys and girls and men and women in the secondary schools, and the training of teachers—on the other hand. It puts into the hands of the Secretary of the Interior the question of the secondary schools, boys and girls 14 to 18, 18 to 22, and the training of teachers. It puts into the hands of the Secretary of Agriculture everything relating to the branch stations and extension work. The Lever bill, very wisely, I think, provided that the Secretary of Agriculture should continue to take care of that extension work, just as he has been accustomed to all through the years, and this bill recommends that division.

Now, the Secretary of the Interior is supposed to get the advice and assistance of the Secretary of Agriculture and of the Secretary of Commerce and Labor in dealing with this problem of secondary schools and the training of teachers, and I regard that as being a very helpful feature, because the Secretary of Agriculture, through the work of his department, with these 2,500 scientists in the field, will be able all the time to check up the work from that standpoint. The Secretary of Commerce and Labor—I am thinking of the splended report which they have recently issued on the subject of industrial schools—will be in a position, because of their knowledge of this subject from the standpoint of the workman and manufacturer, to check up this work as a practical man of affairs. The Secretary of the Interior is to deal with this problem in all of these States through a State board of vocational education having charge of secondary schools and the training of teachers. There are 48 States in this Nation, and in each the administrative features are the same. The bill provides that there shall be a State board of vocational education in each State, and this State board of vocational education shall deal with the problem within the State. They know the conditions there better than anyone else, and no one at Washington can interfere with them at all. The board says to the Secretary of the Interior, "Here is our plan for developing this work in the State, here is the plan of procedure, and so on." And the Secretary of the Interior in the discharge of his responsibility for the effective administration of this act says, "I approve of your plan. Go ahead." And then the State board on vocational education works that problem out for the State, having due regard for the objects sought. The matter is left to the people within the State, and the Secretary of the Interior does not inspect these schools to find out whether the State board is dealing with its problems as it should. The Secretary of Agriculture

deals with these State colleges of economics and mechanic arts and experiment stations.

Now, with regard to the problem of support. The bill provides that the Secretary of the Interior shall annually ascertain whether these States are using this money in accordance with the provisions of the act, and when he is satisfied that they are, the money shall be paid to the States in four quarterly installments, and they, under the provisions of the act, deposit this money in turn to the various schools. Any money given to these schools, the bill provides that the States shall give to the school dollar for dollar, although I am satisfied that the State money contributed will be five times as much as the national money. The amount given by the National Government must be based on the fact that the school which receives it has a right to it. It is also absolutely necessary for the local community to build the school and to keep it up. It then must pay half the cost in carrying on the studies in these industries and the National Government pays the other half. Not one dollar of this money is to be spent in any other than schools supported and controlled by the public, and not any of the money is to be spent for buildings or equipment in any way. The Secretary of the Interior is empowered to decide if in his judgment the States have made ample provision to take care of this money properly. If he finds that they have misused or misapplied any of this money, then he is to withhold a corresponding amount from the next annual allotment. If the States take exception to this action, he is to report the matter to the President of the United States, and the President is to decide finally as to whether or not the State should receive that money.

I do not know that I need to go on much further. I am in favor of the general spirit and purpose of this bill. I am in favor of these provisions as they stand. If I were writing this bill for myself the chances are that there might be some things in it that I would change. But I realize that it is a tremendous problem that we are facing, that there is a tremendous need for this work, and because of the fact that there are so many different ideas, so many different points of view, so many different angles, I believe that this bill as it stands here to-day represents, so far as I know, the consensus of opinion of the large majority of the people who are in favor of Federal aid. There is no opposition in this country to the general idea of Federal aid for vocational education. From one end of the country to the other we have received thousands of letters, telegrams, and communications overwhelmingly in favor of this idea, the general idea of Federal aid, and the present bill is the best construction of what I believe to be the need. The other friends of the cause will so express themselves here to-day, and it is a matter of consideration between Mr. Wilson and this committee as to whether or not there shall be any changes made in this bill. We are here to-day to speak for the general proposition that this bill should be right in spirit and in essentials as it has been presented.

I thank you for your attention.

The CHAIRMAN. Let me say that you now have three quarters of an hour till 12 o'clock and you can devote that time just as you like, unless you want to be heard to-morrow morning.

Mr. WILSON. I would like to be heard to-morrow morning, and I would like some of these gentlemen present to be heard to-morrow

morning also. I would like to introduce now Dr. Clarence J. Owens, secretary and treasurer of the Southern Commercial Congress.

The CHAIRMAN. We will hear Dr. Owens.

STATEMENT OF DR. CLARENCE J. OWENS, SECRETARY-TREASURER OF THE SOUTHERN COMMERCIAL CONGRESS.

Dr. OWENS. Mr. Chairman and gentlemen of the committee, I represent the Southern Commercial Congress, an organization that operates in 16 of the States of our country, but the work we are engaged in is in no sense sectional. Our slogan is a greater Nation through a greater South, and we attempt to deal with national problems such as relate to this question. I wish to point you to the fact that we have recently brought over from Rome, Italy, Mr. Ruben Morgan, a delegate to the International Agricultural Congress. This question before you to-day is one that has received the unanimous indorsement of the executive officers of the Southern Commercial Congress, and this organization is making a national campaign in advocacy of what is known as the Page-Wilson bill. I had the honor, as secretary and treasurer of the congress, to attend a meeting held a short time ago in the room of the Committee on Claims in the Senate Office Building, where we had representatives from all the great national organizations in the United States, including the American Federation of Labor, the National Education Association, the Southern Education Association, the American Association of Agricultural Colleges and Experiment Stations, the National Grange, and trade organizations that I do not recall now, that participated in the conference and went on record as furthering the bill.

Now, the Southern Commercial Congress says through me to-day to say to this committee that our organization stands for all of the principles locked up in this measure. It stands for Federal aid for vocational education, and we have aided in bringing about, or bringing together, a consensus of opinion which shows that the people throughout our territory are practically unanimously in favor of these general fundamental ideas. For your information I will say that the Southern Educational Association, composed of educators of those States, have passed resolutions favoring this bill. Now, I simply wanted to make the statement for our organization. However, I will, in answer to a question that has been asked relative to the work of the branch experiment station, say this: That for a number of years I served as the president of one of the secondary agricultural schools of the South, the one located at Abbeville, Ala., the largest, I believe, of the secondary agricultural schools of the United States. Alabama blazed the way in establishing these schools by congressional districts. They were organized 17 years in advance of her sister State, Georgia. In that school in our branch experiment station we did not attempt to do deep research work, but we used our station as a laboratory for field tests in seed breeding, a work for that section which is very vital. That station bred up cotton seed that was furnished to farmers throughout that district which revolutionized in a sense cotton culture. From that station seed was furnished to the farmers after a great many tests and experiments, and they found it especially adapted to that particular part of the State.

On yesterday I had the pleasure of hearing the Secretary of Commerce and Labor in his great speech before the commercial men from all parts of the United States now assembled in this city, and he pointed out the fact that while we admire the great military organization that we have read about in Germany that Germany is still better organized for the education of her people along lines that deal with the problems of life and the basic problems that stand for the uplift of that great empire. And from observation of European countries such as Germany, we can learn the solution of these basic problems that to a great extent will help to solve the difficulties and problems in the rural life of America.

Mr. WILSON. I would like to call on Mr. H. J. Patterson, director of the Maryland Experiment Station and master of the Maryland State Grange.

STATEMENT OF MR. H. J. PATTERSON, DIRECTOR OF THE MARYLAND EXPERIMENT STATION AND MASTER OF THE MARYLAND STATE GRANGE.

Mr. PATTERSON. Mr. Chairman and gentlemen of the committee, I did not intend to speak at this time at all, but I think it will take no argument to convince the members of this committee that the people of his country are wide awake in their demands for a system of vocational education, and we all realize that it is not on the basis in this country that it should be. We believe in the general principles of vocational studies and that the people not only engaged in agricultural and rural pursuit, but the people engaged in industrial pursuits should have a training for their life's work in all common sense, and have the opportunity to properly prepare for that work in our secondary schools, so that when they come into the industrial pursuits they will enter them as trained men and women and not enter them without any training whatever.

I spoke to this committee a few weeks ago on the matter of the agricultural extension and demonstration feature when you were considering the bill introduced by Mr. Lever, and I can not do more than repeat what I said then, that I am satisfied that there is nothing that could be done that would so help the productive capacity of the farmers of our country as a national system of agricultural extension and demonstration. We have been accumulating facts at our experiment stations for more than 25 years, and these are not being applied so as to enable us to reap the rewards of that work in the way in which it should be because the rank and file of the farmers who are to apply them have not been able to see them with their own eyes, and the vast majority of farmers will not apply things by simply reading or hearing about them. Whenever they can see the demonstration of these things located right in their very vicinity then they will go home and apply these results, and it is only by that means that we can hope to affect very materially an improvement in our agriculture. I am satisfied that the proper system of demonstration in the State of Maryland will be worth many millions of dollars annually to our State, and other States, I believe, will experience the result in like proportion. So that I can say that our State grange in Maryland is heartily in favor of the principles of vocational education as provided

for in the various measures that have been proposed, and we are heartily in favor of the demonstration work, and I am sure that the people in our State that are directly connected with educational matters are heartily in favor of these measures.

Mr. WILSON. I would like to introduce Mrs. H. J. Patterson, chairman of the home economic committee of the National Grange.

STATEMENT OF MRS. H. J. PATTERSON, CHAIRMAN OF THE HOME ECONOMIC COMMITTEE OF THE NATIONAL GRANGE.

Mrs. PATTERSON. As chairman of the home economic committee of the National Grange I will speak only on the side of this bill that deals with home economics, although the National Grange believes in Federal aid for vocational training, and has indorsed all the bills introduced at different times for vocational training.

The question of home economics touches us all very vividly and keenly, and I think that unfortunately many of us do not realize the scope of this question. Unfortunately a great deal of work known as home economics has been done in our schools and in our colleges and through our extension work in farmers' institute meetings, and has only been cooking, so that unfortunately the term "home economics" has come in many minds to mean cooking. But home economy does not mean cooking any more than agriculture means the raising of poultry. That is one very narrow subject of home economics, and for that reason I want to speak for just a few minutes of what this will include when we come to teach it to our children. It includes every science and every study that will go toward making better homes for us. I was very glad to hear Mr. Prosser this morning speak of some of these things. We study the life of plants, and we know that plants require different conditions and different foods, and that we have to supply certain things to the soil to make right conditions, and yet a large number of mothers think that food is food. They do not recognize the fact that there are certain foods that build the tissues of the body; that there are other foods that supply heat for the body, and that there are others that supply energy. And they do not know that these have to be given in certain proportions to produce right physical conditions in their children.

There is nothing that will improve the health of our race as the study of dietetics, so that children will have right foods given to them in right proportions, and there is nothing in my mind that will help more to reduce the cost of living. There is a great difference in the cost of these foods, and the value of these foods, and most people are giving the most expensive foods which are injuring the health of their children. They are not building up on right principles, and they can not do any better because they do not know, and they can not teach their children to be any better mothers and home makers, because they do not know themselves. Consequently the girls have to learn the things in the schools. I could go on and mention many things that the study of home economics embraces, the strengthening of the body so that it can resist disease, the development and training of children, the furnishing of the house, but I think you will see that all of these things that will tend to make better homes and

bring up a better race of children are included in this question of home economics.

Now, in regard to this bill, I want to state that several features of it are very important. It calls for the use of this money in secondary schools. We are going to use a large amount of money for training our children in secondary schools, and this work can be done in its best form in secondary schools. That is where we are going to be able to give the greatest amount. We will be able to convey a great deal of information between the ages of 14 and 16 years. Now there are not teachers enough for this work. We do not have enough prepared women to do this work, because, as I said before, many colleges that are giving this work or are supposed to be giving home economics are teaching cooking and sewing, and we do not want any teachers in our high schools except specially trained or college-grade teachers. So that there is another strong feature of this bill, placing many prepared teachers of college grade to do the work in the schools.

When we come to put this work into our lower-grade schools, because there it must be put, there are only—I think it was 20 per cent, but I saw just a few days ago it was a much lower per cent of children that ever get into the high-school grade, so that if we are going to reach the mass of them, the 80 or 90 per cent, we must go into the grades to do it. We must teach this work in the graded schools. It is perfectly advisable to put this work into the graded schools of the cities by special teachers, but it is not advisable to put it into the country or town schools by special teachers. The work there must be done by the grade teachers. When we get into the rural schools, and those are the ones I am specially speaking of, it is going to be a difficult problem to reach these rural children, where this 80 or 90 per cent is located, and that is where we must make an impression. If the grade teacher is prepared in the normal school she will be able to do this work in connection with the work she is now doing. You that know anything of rural schools know that notwithstanding the fact that the rural teachers are greatly overworked this will not add anything to their work. This trouble is that we are teaching science to women in schools and colleges without giving them practical application in the home. There is no manner of taking it back home, of making the practical application in the home, and it is only by putting it into the normal school, by instructing the teachers who attend the normal schools, that it can be brought back into the graded schools and vitalize what they are already teaching. It will not add to their work and I know it can be done, because I have done it myself. I know the equipment in the lower schools will not be expensive, and it can be handled by the grade teachers. I have tried it myself. I have taken it into a little one-room school and taught there from a little book called—well, it is Good Health, or something of that kind, but I have vitalized these subjects, I have brought home the truth right there and given a good many lessons, and I know it can be done without elaborate equipment. This bill will meet all of the requirements and will put the question of preparing us for better homes right where it should be, in the common schools.

Mr. WILSON. I would like to introduce now Miss Laura D. Gill, representing the General Federation of Women's Clubs.

STATEMENT OF MISS LAURA D. GILL, OF SEWANEE TENN., REPRESENTING THE GENERAL FEDERATION OF WOMEN'S CLUBS.

Miss GILL. Mr. Chairman and gentlemen, I am speaking for a round million of women, and I hope that you will be so grateful that the other 999,999 stayed away that you will give us a very favorable hearing. We are not only officially interested in the passage of this bill, or with the provisions that this bill represents, but we are individually interested in it. The General Federation of Women's Clubs has passed resolutions favoring Federal aid for this practical training of our women by making knowledge function, by making what we know real, and comprising a whole group of agencies. The legislative committee of the federation has been authorized to help in any way it can to bring these privileges to our women.

It is very hard for me, coming as I do from a New England farm, with all the love that I have for practical things and real manual work; coming from the presidency of a woman's college, knowing what it means to have the strictest training, knowing what it means to these women who have been thoroughly trained to find these women who have not been trained for their work; and I have had the pleasure in the last year of establishing the first bureau for placing college women in other occupations than teaching. We have a branch bureau now in New York, also one in Philadelphia, and we hope soon to have general bureaus for the placing of college women so that they may exchange their labor at the end of the week as the bureaus of England do.

I am speaking not only for the women I represent, but we are interested of course in the welfare of all women, and the woman who is interested in the well-being of her family can have the assurance that will come when her husband is a settled worker and she can rest assured that his work will come with regularity. We care as women for the girls that are forced out of the home into the shops, for those who through the severity of laboring conditions are forced to sacrifice only too often the dignity of that womanhood. To us they are pathetic figures, but almost as pathetic is the girl at home without a worthy occupation. A man is just about as conscientious as his daily work makes him, and that is just as true of the woman as it is of the man. Seventy-five years ago there were about 20 skilled trades in American homes. There was room there not only for the mother as the administrative officer, but there was room for every daughter to grow up with all the work that she could readily do, but when about 17 of those 20 trades went out into factories and left only the less skilled forms behind, the girl who cares for her social status could not go out into the factories to find her work, so she was left at home with nothing to do. We have this condition to-day, and what is the result? Women are growing restless because they are not trained to intelligent industry, because they are not worthily occupied, and I hope they will stay restless until they find good, intelligent, scientific work enough to do at home to keep them occupied. It is for the womanhood of America that we appeal for this school training. When one out of every ten of American marriages ends in the divorce court we know that something is

wrong. The woman in the American home must have a sanitary knowledge of the care of the home in order to be assured that her children will grow up to be worthy citizens, to be real servants of our Nation, and so I believe that this bill should be passed that it may be started at once. Imperfections of course there are in it, but we want Federal aid, we want trained teachers, and I hope that we shall soon have equal training for our women as for the men.

Mr. WILSON. I would like now to introduce Dr. H. G. Williams, dean of the State Normal College of Athens, Ohio, who is the chairman of the executive committee of the National Committee on Agricultural Education.

STATEMENT OF DR. H. G. WILLIAMS, OF ATHENS, OHIO, DEAN OF THE STATE NORMAL COLLEGE AND CHAIRMAN OF THE EXECUTIVE COMMITTEE OF THE NATIONAL COMMITTEE ON AGRICULTURAL EDUCATION.

Dr. WILLIAMS. There was so much of that title that I am afraid that it may not be plain just what organizations I represent. In the first place, I am at the head of the State Normal College of Ohio University. In the second place, I represent the executive committee on agricultural instruction of the National Education Association. That committee is composed of one representative from each State of the Union, and it has a further organization by the election of an executive committee, and it is this executive committee that I represent. I am also here representing the National Association of Normal Schools.

I shall confine my few remarks to the educational features of this bill. I want to say, gentlemen, that it seems to me a very great compliment to the members of this committee and to the Congress of the United States that such distinguished men can give so much thought and so much attention and serious consideration to a problem of this kind, which has nothing in it in the nature of political interests whatever. I tell you, Mr. Chairman, it is one of the fundamental problems in statecraft that confronts this body. We are reaching that situation in this country where we must realize that the people in it must be given the kind of education that will enable them to earn a living. At the same time they feel that the higher education is so important that they must also have that, but the colleges and secondary schools largely—but the colleges especially—have been training men and women for the professions. We have in this country, however, out of every 100 people 92 people who do not belong to the professions; 92 per cent of our people belong to the industrial classes, and 8 per cent belong to the professions and to the idle classes. After all, gentlemen, we must all go back to the land for our support, and when we study statistics we find that in this country we are producing less per acre on our land than they are in the older European countries. We must look to see what the cause of that discrepancy is. In nearly all of the European countries, especially England, Germany, and France, they are producing from two and a half to five times as much per acre of the main agricultural crops as we are in this country, and we are a new country and ought to be able to produce more.

Now, Mr. Chairman, the practical education is that which will teach our boys and girls how to produce more per acre, and instead of 29 bushels of corn to the acre let us teach them how to raise twice 29, something which is not difficult to accomplish. If we can double the agricultural production of this country, it will be practically the same thing as doubling our national domain. It will be practically the same thing as going to war and conquering another country as large as this. Isn't it better, Mr. Chairman, that we go to war at home and war with ignorance, so that we may train these boys and girls of to-day, who will be the men and women of to-morrow, that they may produce double the bushels that we now produce on our acres? The principle in this bill, the principle of Federal aid, was fixed when Abraham Lincoln signed that first bill on July 1, 1862, and we now want to extend that principle. We have been spending millions of dollars very wisely to encourage extension work through the colleges of agriculture. It has done wonderful things for the agricultural interests of this country; but we know that a man who is mature, whose habits of life as well as habits of agriculture have been formed, is not very rapid in taking up new ideas; and a bulletin issued by the Federal Government is authority for the statement that in Iowa not more than 1 per cent of the farmers profit by the bulletins issued for their benefit, not because they are not in such language that they can read it and agree with it, but they do not see it done. Therefore, gentlemen, this extension work should be encouraged as this bill provides, so that these boys and girls, as well as fathers and mothers, may see the work actually done.

So I believe, Mr. Chairman, that we will accomplish this purpose best and sooner by impressing upon the rising generation measures that shall carry hope in the training of men and women whose habits are already formed; but let us put into every school in this land, where it is possible, teachers equipped to teach the principles of agriculture, home economics, and the fundamentals of the trades and industries, adapting each form of education to the peculiar conditions of the community or State in which the school is located, so that these boys and girls when they become men and women may have the fundamental training from the secondary school, in which we will teach domestic science, or, as some one has said, cooking and sewing, and we will teach all of these other things; and when girls come to that school they will learn those practical things and go out in the country schools to teach them. Girls from wealthy homes do not feel that it is an undignified thing to learn the arts of home making, and I want to tell you that they are proud of their accomplishments when they get them, because they feel that they have something they can work with. So this bill provides $1,000,000 for the training of teachers in the normals for secondary schools, for the training of teachers to give instruction in agricultural colleges, $480,000, $10,000 to each State. These teachers will be trained to go out and teach in the district schools, the city schools, the township schools, or the normal schools of the United States. Nearly all the leading normal schools for the training of teachers have now adopted a college standard of entrance which requires graduates from a high school for admission, two years' work for training in elementary schools, and four years for high-school positions.

Those are the principles upon which our standards are now based in the leading normal schools of the country. There are nearly 500,000 teachers in the public schools now. Statistics show that nearly one-sixth of them leave the profession each year. In other words, the normal schools would be called upon to furnish 90,000 teachers a year, to turn out a graduating class of 90,000 a year to supply that demand. They can't do it yet. They haven't begun to do it, and so I say this will be a great aid, because it calls upon the States to provide teachers for that purpose.

Mr. MAGUIRE. Can you give us a line of demarcation between the professional and vocational? That is, how far does the vocational reach over, or does it reach over?

Dr. WILLIAMS. I will be very glad to answer that question. We would have in one institution agricultural instruction, manual training, domestic science, and arts—in manual training we do not take up very many trades.

Mr. MAGUIRE. Well, can't you answer my question direct?

Dr. WILLIAMS. To answer your question directly, I should say that in my opinion no normal school or college can safely and fundamentally train teachers merely in the theory of agricultural instruction or in the work of domestic science, trades, and industries. There would be opportunity for observation and practice rather than experimentation. Experiment stations will aid the blazing of the way of new trails. People will make discoveries and then branch stations in connection with these secondary schools will gradually grow up where demonstration can be carried on. The most important training that the student gets out of this work is its educational value. I want the prospective teacher to learn that it is a good thing to learn how to work, and he ought to teach every boy and girl in his school to honor the man who works, because the time is coming that the men who can work and does not will be looked down upon. And thus this training gives the prospective teacher that viewpoint, that interest in the work because it teaches him not only the theory of domestic science and agriculture, but it gives him the practical side. We have our experiment gardens and we have this work to carry out in the trades as far as we can.

Mr. MAGUIRE. The question I had in mind was would you have your vocational education finally reach out and take in law and medicine, which are commonly known as professions, but which are also vocations? Is not law a vocation?

Dr. WILLIAMS. It is; but from my standpoint it is not part of the training for public schools.

Mr. MAGUIRE. I was speaking of the point of differentiation in this bill, not of any details in reference to the bill.

Dr. WILLIAMS. You want the division?

Mr. MAGUIRE. Will you finally, ultimately, have this vocational education go on and take over the preparation of the lawyer or the mechanical engineer or civil engineer? Where is the line of demarcation?

Dr. WILLIAMS. There is a demarcation there. What I had reference to was fundamental training. Every man and every woman must learn certain things. Now, if he takes up the study of law or medicine there comes a time when he enters a professional school for that particular purpose. The student who goes to the law school

goes through high school or college and then he enters a school specially for the purpose of studying law.

Mr. MAGUIRE. They are all making preparation for life are they not?

Dr. WILLIAMS. Yes, sir.

Mr. MAGUIRE. It seems to me that they are all vocational finally. It is all a preparation for their life occupations.

Dr. WILLIAMS. But the ministers, lawyers, and the professional classes represent only 8 per cent of the population. These classes, for whom I am speaking, represent 82 per cent of the men and women of this country. It is the farmers and their wives, the workingmen and their wives who are going to make this country prosperous, and with the increasing hatred for work on the part of the American citizen the condition is going to grow worse, and I claim that the way to train a farmer is to catch him when he is a boy and give him some insight into the great work of agriculture and teach him that it is an honorable thing to do. Teach him that he may fill as important a place in the world as the man who writes a book or preaches a sermon. We must have ditch diggers, and the ditch digger must be respected. Somebody must do this work, and if every man and woman in the country should be a college graduate there would still be farmers and there would still be ditches to dig. If we raise more bushels of corn to the acre we consume more, because with higher education we raise our ideals and multiply our wants, and consequently we must have greater production with increased education.

Mr. WILSON. Before closing I would like to suggest to Mr. Maguire, in reply to his question, that our present high-school system is in reality a vocational training, to a great extent, for the professions that he has referred to, and yet no vocational training has been provided for the arts and industries.

The CHAIRMAN. As it is 12 o'clock, we will now adjourn.

BALTIMORE, MD., *April 29, 1912.*

Hon. JOHN LAMB,
Chairman of Agriculture Committee, Washington, D. C.

DEAR SIR: As a delegate from Baltimore last Tuesday before the House Committee on Agriculture, an adjournment took place before I was called upon, and as I was unable to be there on Wednesday, it was agreed to receive my argument as part of the record.

I inclose copy and ask that you take a few minutes to read same.

Yours, truly,

J. C. VINCENT.

WASHINGTON, D. C., *April 24, 1912.*

To the Committee on Agriculture, House of Representatives:

Mr. Chairman and gentlemen, I am here as a delegate from the Baltimore Chamber of Commerce, who are always interested in measures for the good of these United States.

I wish to state that our board of directors and members generally favor vocational education as outlined in the Page-Wilson bill now before you.

I am also second vice president of the Associated Boards of Trade of Maryland, and the Page bill was discussed in convention of that body last November at Frederick, and after being referred to a special committee was indorsed by the convention.

In my work as vice president of the Maryland Crop Improvement Association and member of the Council of Grain Exchanges, I have come in contact with the farming interests and can indorse the arguments made by Director Patterson and others, so I will not take up your time to reiterate them.

Personally I have advocated the teaching of home economics in the public schools, and as a family man am in sympathy with the sentiments already expressed by the ladies who preceded me.

As president of an improvement association in a rural district I am confident that if the efforts for redirected education materialize, we shall be doing our duty to the generation who follow us, and furnish the leaven that will leaven the whole country.

This reconstruction in our school system I consider of vital importance, in view of the hundreds of thousands of immigrants who are landing on our shores.

The instructions in trades and industries is all important, for we all know that children at the tender age of 3 to 5 years are very observant of their elders, and will take up a hammer or tool and try to copy what they have seen done.

Why should they not have the opportunity at school to use their hands as well as their head?

Who can tell what may emanate from that brain in the future?

Prof. Pupin, of Columbia College, who originated the improvements that made the long-distance telephone possible, worked as a farm hand in St. Marys County, Md., when he came from Servia.

I am satisfied that the foreign immigrant will learn quicker through his children to become a good American citizen than any other way. Therefore we must land our energies on the children, and that can best be done through the schools.

Efficiency should be our watchword, and it applies to every department of life.

If we give a good foundation, such as is covered by the R's, with some knowledge of nature, home economies, and industries, they will be better prepared to do their duty in whatever sphere they may be placed. At a certain age the latent powers of the young man or young woman will develop and they can then specialize in whatever branch they may desire.

A mechanic to get the best results from rough material requires knowledge and good tools.

To get good results from the raw material in the schools we must have the best teachers, and the framers of this bill evidently recognize this and make provision to bring it about, and now it is up before the representatives of millions of people and should not be turned down.

It is said that the greatest number of accidents are amongst the agriculturists. In view of the labor question everywhere there is no doubt that more scientific farming will lead to increased use of labor-saving machinery, and that emphasizes the necessity of teaching boys, as well in the country as in the city, something of mechanics.

Do you know that 19 out of the 21 States that you gentlemen represent contain thirty-five and one-half million acres of undrained land? Land that could be utilized at much less cost than irrigation costs in other States. Educate the boys on such a standard that in the near future they will reclaim this, and by raising 50 bushels of corn on this acreage it would produce one and three-fourths billion bushels additional corn. Just think of the money value to this country and the advantage to the manufacturing industry.

The honorable member from Mississippi can tell you that boys in his State have raised from 115 to 225 bushels per acre, and the honorable gentleman from South Carolina probably knows that from 115 to 165 was possible in his State.

This shows what efficiency can do.

Mr. Chairman, your fellow member from Nebraska is probably acquainted with the story regarding H. W. Campbell, of Lincoln—The Bonanza farmer who was a machine-shop foreman in Vermont and went to Dakota Territory in 1883. A lame mule and long-horned ox yoked to the plow broke the soil and put in his wheat. Then dark days came from summer drought, the blades of wheat dried up and died. Other farmers had similar experience; those who could move, did so, and went to try their fortune elsewhere. This man could not; he did not have the wherewithal. Discouraged, he was walking over his fields one day and noticed here and there tufts of green; examining closely he found in each instance the print of the mule's hoof. He thought over it, and he thought and finally decided that the packing of the soil had conserved the moisture. He had been a mechanic, he could use tools, so he made a heavy roller, and the next season he rolled his sowings, secured a good crop when his neighbors failed.

Result was that a man who could make tools and use his brains, and with what the old lame mule had taught him, revolutionized the growing of wheat in the Dakotas.

Gentlemen, I ask you to give our boys and girls chance. None of us can tell but that some day in the future what they have learned in a vocational school (established by your efforts) may come in play and be the means of saving life on land or sea.

The chain is only as strong as the weakest link, and it depends upon the quality of the material and the workmanship.

As the young tree leans so will it grow. If it is well rooted and upright, it is better able to withstand nature's storms. So it is with the children, and if this vocational education is put into effect they will be prepared to stand the world's buffetings and better fitted as home builders to bring happiness and contentment in this country.

You, gentlemen, are executors to a trust and should be proud of the opportunity to make such a splendid investment for your country's benefit. It will pay dividends quicker than canals or war ships. I thank you.

J. CALLIN VINCENT.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Wednesday, April 24, 1912.

The committee met at 10.30 a. m., Hon. John Lamb (chairman) presiding.

The CHAIRMAN. You will please introduce your speaker, Mr. Wilson.

Mr. WILSON. Mr. Chairman, I would like to present the Hon. William C. Redfield, of New York.

STATEMENT OF HON. WILLIAM C. REDFIELD, MEMBER OF CONGRESS, NEW YORK.

Mr. REDFIELD. Mr. Chairman and gentlemen of the committee, I have not prepared an address on this bill, but there are two points of view from which I wish to speak to you briefly upon it. It is a pleasure to be associated with my friend, Mr. Wilson, in connection with this bill; he and I have just been through six months of industrial investigation and it is a great satisfaction to be with him again.

I hesitate from which side of this subject I shall speak to you, whether as a manufacturer, who has been suffering from the absence of the very things here sought to be provided, or as president of the National Society for the Promotion of Industrial Education. I am going, however, to ask you to forget that I am one of your own colleagues and to regard me as an outsider. Let me, in justice to my friends of the National Society for the Promotion of Industrial Education, say that this society stands firmly and squarely behind this measure, and allow me to tell you, briefly, what the National Society is. My associate and friend, Mr. Prosser, told you briefly yesterday, but I want to add a word more.

The National Society for the Promotion of Industrial Education has on its board of 26 managers, comprising 5 representatives of organized labor, 8 manufacturers, 9 educators, 1 representative of public utility companies, 1 merchant, 1 engineer, and 1 contractor. It is a fairly representative body covering all the great industrial cities of the land. From my personal knowledge for six months back, and for a time to me unknown before that, this society has had this

measure under thoughtful consideration. It has again and again discussed the elements which are consolidated in this bill, and it takes the deepest possible interest in the measure. Nor has there ever been, Mr. Chairman, a bill brought before any committee of Congress on this subject which has been more exhaustively studied than this bill, not only at the hands of Senator Page and his associate, Mr. Wilson, and in the executive departments of the Government here, but at the hands of our own society and of educators generally.

I am able to say to the committee from my own knowledge that the wisest and most thoughtful men have for many months continuously studied all the phases covered by this bill, and it now represents in its present form their ripest and completest wisdom. Whatever is known by the manufacturer, by educators, and by representatives of organized labor on the subject of industrial, agricultural, and mechanical education is here embodied. We can testify to the fact that there have been given many days and even months of constant study to this subject, which has resulted in this measure, and in this respect I believe it may be considered to have been very thoroughly worked out.

Now, from the other side I would like to speak to you from my own experience, running over 30 years as a manufacturer, and somewhat, also, from my experience as an investigator in a modest way in other countries as to what they do and we fail to do, Mr. Chairman. I have sometimes felt that if we could charter a vessel and ship a group of properly assorted farmers to Denmark they would come back very much enlightened and saddened. In the fields of Denmark, which have been under constant cultivation for over a thousand years, the average crop of wheat is 42 bushels to the acre, and even that is often exceeded. The average result in dairy products in Denmark is such as to make us ashamed, for the best production that we have is hardly equal to their average. It may truly be said of that little country, which has desperately suffered at the hands of its greater neighbors, that there is almost no such thing as poverty, and it would astonish you, I am sure, those of you who have not been there, to go into the little country stores of Denmark and see the extent to which common education has there been carried, for every boy and girl in the country stores, and in the smaller towns, would speak to you in your own language—a thing which I think is not true of any other country in the world. That same thoroughness of education has been carried into their industrial and agricultural life. It was astonishing to me to see, when in Copenhagen two years ago, two ocean-going ships sailing daily for English ports filled with butter; it is one of the most surprising things that exists in Europe.

Mr. WICKLIFFE. Was it all butter or oleomargarine?

Mr. REDFIELD. All butter, and butter of a very high grade at that. Two large ocean-going vessels sailing every day out of Copenhagen filled with butter. If we could bring ourselves to the level in respect to agriculture that little Denmark has brought herself, the wealth of our Nation would increase by such figures that it would be almost impossible for us to realize their greatness; it would mean the multiplication by three of our entire industrial wealth at least.

The CHAIRMAN. You know, of course, that the conditions in Denmark are very different from what they are here.

Mr. REDFIELD. I don't say this as a criticism, but as an incentive. Denmark, of course, has grown up to this stage through a thousand years. It may be that we will have to pass through some hundreds of years yet before we can do as well, but it is a magnificent example for us. I am very far from using this as a criticism, but I would like to see our own country do the same way. Take another example of what is possible in the way of agricultural development, just to show what can be done agriculturally and what, as I have said, we fail to do; we might take an entirely different example and refer to Java, where they have a territory of almost precisely the area of the State of New York, with a population of 30,000,000 of people, and yet they are large food exporters. This is a most unique and extraordinary fact.

Now, as a manufacturer, I have been suffering for 30 years through the absence of the very thing this bill aims to provide. To-day in the factory in which I am interested it is next to impossible to obtain a sufficient number of skilled men. My experience has been that the manufacturer is always willing to pay well for them if they can find men who can earn the wage. Taking a great industrial center like the city of New York, there is now almost no means whereby a young mechanic can find the proper training, almost none, in the sense of the means which are provided by this bill. They are so pitifully inadequate to the demand that the percentage of the demand to the supply is sad. I have repeatedly had the experience that the sons of my own mechanics desiring to secure training along the line of their father's employment could do but little toward finding that training; and yet the city of New York spends, if I am correct, something like $40,000,000 a year on its educational system. I know the gentlemen in charge of the work and the schools that they govern.

The CHAIRMAN. Haven't they any mechanical institutes?

Mr. REDFIELD. Oh, yes.

The CHAIRMAN. We have in Richmond.

Mr. REDFIELD. But those mechanical institutes, Mr. Chairman, would not supply, if their entire output was devoted to mechanics, the needs of one large factory. The trouble is that our industries have far outgrown the supply of skilled mechanics, and we are forced to take what we can get. If I were the son of a mechanic and desired to follow my father's trade, I should be obliged to pick up from my father what I could, for I might be unable to find a place in any one of the mechanical institutes or in one of the manual-training schools; I would be unable, I say, to find a place, because if 5 per cent of us strove to get those places we could not, as there is not room. If I were able to get in I might add a little of theoretical training to what my father could teach me, and then I would have to go into a shop and take a subordinate job, probably as a helper way down the line at a stage just above the laborer, and little by little I would have to learn from the men about me and from what the foreman had a chance to teach me. By the time I had spent four or five years, at a great loss to myself in wage, at a loss to my employer in reduced product, and at a great loss for the things I spoiled, the tools I hurt, I might, at the end of five or six years, come out and call myself a lathe hand, planer hand, or vise hand. And then going from that shop into another one I would speedily find that I had to unlearn practically all that I had learned, because their tools were different,

their methods were novel, and their ways were strange to me; the superintendent would not like the methods I had learned and I would be forced back to my old level. So it is a common thing for men to come well up to the time when they should marry before they are able to call themselves—whatever they may call themselves—before they are in very truth skilled mechanics.

I think I may fairly say that my experience tells me there has never been a time in the last 20 years, except in times of severe industrial depression, with which we are all too painfully familiar, in which we would not have gladly taken on trained men at a higher wage than we were paying if those men could have been had. And I believe it is true to-day in a very large percentage of cases with industrial establishments in America, equally true to-day that there is no means, substantially no adequate means, of training such men. Now, if you would walk down the line of benches in one of these establishments and ask those men at work there where they were taught what they were doing there would hardly be one of them who could say that he was taught anywhere.

Do any of you know or have you ever heard of a place where all the young men who wanted to go could go and be taught so practically that when they left that school they could take the same position in the mechanical industry that a young physician takes when he goes out with his diploma from a medical school, or that a young lawyer takes when he is admitted to the bar? There is to my knowledge no such place.

The CHAIRMAN. Will this bill provide such a place, and is it intended in this bill to provide funds to meet that situation?

Mr. REDFIELD. This bill provides for the providing of such places; that is precisely what this bill does provide, and it provides it alike for the girl who is to be the instructor and the manager of the home; for the young man who is to be the manager of a farm, or for the young man who is to go into a great industrial establishment on a level with the skilled mechanics and with his young manhood well before him in which to work his way up, winning promotion until he has reached his own industrial independence.

To-day, Mr. Chairman, and in this I assure you I speak from painful knowledge, there is hardly a factory in America that is not more or less of a kindergarten. I think it ought to be; the manufacturer ought to be the chief learner in that kindergarten; but, as a matter of fact, in every department of that shop there is a painful process going on of entrance, elimination, and discharge. The percentage of men who stay is, in many cases, pitifully small to those who enter and those who leave. And it is a perfectly understood thing among the men that they will go from shop to shop strictly for the purpose of education. John comes up, and he will say to me, "Well, Mr. Redfield, I have been with you six or eight months and I have learned all I can here and I want to get into another shop." He knows he can learn something more in some other place, and so this process of moving goes on. This results in a terrible loss to the manufacturer and is also a serious loss to the men, because when John leaves my shop when he is getting from $3.75 to $5 a day he can not go to some other place and earn that amount; he has to start in at a stage very much lower down and grow up again. I have known men to go from shop to shop, through perhaps 10, at that loss to themselves in every

move, and their employers lose through their lack of productivity. And they finally come back, perhaps at 35 years of age, and say, "We are ready now to take a job permanently at a satisfactory wage."

Mr. McLAUGHLIN. Is it your idea that the General Government by national law will make provision for teaching these things which a man can not learn now without working until he is 35 years of age?

Mr. REDFIELD. I do not think I have made myself clear on that question. It is my idea that the National Government should provide for the stimulation of legislation of such character to be operated by the States in their own way and under their own control, as will put a young mechanic, at the age of 23 or 24, where now, by very laborious effort, he is unable to get until he is 35 or 40, if he ever gets there at all.

Mr. McLAUGHLIN. You say the Federal Government shall do certain things, and that the States shall have control and do all the work; how do you reconcile that with emptying all this money into the State treasuries?

Mr. REDFIELD. I think a careful reading of the bill will make that clear. If I understand it correctly, the thought is that the National Government, in consideration of its assistance, shall be in the position to prescribe certain standards which must be met; that the National Government does not in any sense go into the details of administration, which is strictly a State function. The States are to carry on the work, but they must to get Federal aid carry it on in accordance with certain standards provided and required. Now, that same thing precisely takes place and has worked with wonderful success in the State of New York. The State does not interfere with the municipal education bodies at all, but it provides certain standards for them to follow, in consideration for which it extends State aid.

Mr. McLAUGHLIN. What is to be the Federal function?

Mr. REDFIELD. Providing funds and setting certain standards will be its most essential function, which can only be fixed by some central body, else you might have 48 distinct standards of education not one of which would be everywhere available. For example, you would hardly accept for employment in the State of New York a mechanic whose mechanical education was based on standards prescribed in a State where there was almost no mechanical industry; nor of a young agriculturist who was taught in a State where there was no agricultural interest.

Mr. McLAUGHLIN. Suppose the standard prescribed by the Government did not meet the views of the boss to whom the young man applied for employment. You said that when a man had learned all he could in one shop and went to another he had to unlearn all he had learned, because his methods did not meet the views of the man under whom he was employed. What assurance have we that the Government could establish a standard that would be satisfactory to all shops alike?

Mr. REDFIELD. For the reason which you have stated so clearly. In the present complete absence of system, the present complete ignorance of education, the man who comes from your shop into mine has imbibed from you, perhaps, not education, but simply your ways of doing things.

Mr. McLAUGHLIN. A way I have and have a right to demand.

Mr. REDFIELD. Quite so. But he comes to me not as an educated man, but a man who has simply imbibed your preferences. The nature of my business may be different and I may require something entirely unlike what he has learned; whereas if that man had received from some thorough training school a proper general training he would be fully acceptable to us both and he would be abundantly able to find all the work he wanted at satisfactory wages. We had precisely the same problem with the school-teachers; no one criticizes the normal-school teacher now, but at one time they had to teach the way the local school committee wanted them to teach.

There is no possible argument that can apply against the thorough training in his mechanical work of the young man who seeks to become a skilled mechanic, but if you are going to start this country on the line of absolute individualism in education, then it will be many a long century before we reach any high standard of productiveness in our mechanical industries. We have in this country an almost complete absence of mechanical education. It is a horrible situation——

The CHAIRMAN. Have not each one of our States got mechanical training schools?

Mr. REDFIELD. No, no, Mr. Chairman, and yes; it depends on what you mean by "yes" and "no." But, Mr. Chairman, for the State of New York to provide 10 mechanical schools, such as it now has and offers to its youth, is to provide, for example, one physician for the city of Buffalo or one for San Francisco—hopelessly and ridiculously inadequate for the work to be done. They can not do it and do not, and no person informed on the subject pretends that they do it. I never employed and no manufacturer ever employed—until recently I was personally familiar with over 2,000 factories in this country—a young man from any mechanical-training school and put him in as a strictly high-class, first-grade mechanic directly from the school. If anybody here does know of such a case, I would be grateful for the information.

We can take you to-day to the city of Detroit and point out factories that are seriously thinking of moving away because of the impossibility of getting the mechanics necessary to run their factories, because the demand in the automobile shops is altogether greater than the entire city and surrounding community can provide.

Now, if I may, I would like to pass on from that to the other side of the question.

Mr. WICKLIFFE. It would be difficult, if a sufficient number of schools were established to meet the requirements of the country at this time, to find a sufficient number of instructors, would it not?

Mr. REDFIELD. This bill provides for the teaching of instructors. That has been a very serious difficulty in many parts of the country: we not only do not teach the youth of the country, but we have nobody to teach them. The first thing we have got to face, gentlemen—I do not like to say this, but it ought to grind very deeply into our consciences as Members of the House of Representatives—is that despite all our talk about the greatness of America, its wonderful institutions, its old flag, its great traditions, and its personal liberty, in respect to industrial education and agricultural education and performance we are a backward people. Now, that is the first thing we have to learn. We are not the equal of Holland in agriculture; we are not the equal

of Denmark in agriculture; we are in our industrial education 25 years behind Germany. That is the first basic fact we have to consider, and if you gentlemen would go with me, as I have been, into the great German factories and see what Germany does with resources that are trifling compared with ours, whereby the German boy or girl is taught from young boyhood and girlhood to be skilled mechanics, makers of marvels. They are developing a generation of specialists in their own work, so that the German boy in the shop and the German girl in the mill and at home are becoming like the physicians and the lawyers at their professional tasks.

So, you see what we are up against. I have faced competition with Germany with the products of my factory in almost every one of the great civilized countries of the world. We have wonderful natural resources; we have natural initiative; we have a splendid individual factor which exceeds anything that Europe has; we have alertness of mind; it is all these things that have carried us through; but when it comes to industrial organization and to the development of the individual man and woman in training to meet the competition of the world, then we are a backward people. Yes, we have yet to learn a lot.

Now, in explanation of this backwardness we may take the position that Germany might have taken by saying to Saxony, you do your share; to Bavaria, you do your share; to Prussia, you do your share; to the city of Hamburg, you do our share toward the welfare of the whole country. This would not have produced the successful Germany we have to-day, and the danger of our situation is that we will do precisely that thing, and the aim of this bill is to provide for such standards, regulated and stimulated by the National Government, as will make our industrial, domestic, and agricultural education a unit along certain standard lines.

Mr. McLAUGHLIN. What do you mean by standards, and how would you fix them?

Mr. REDFIELD. I would like to have Mr. Prosser answer that, if he will.

Mr. PROSSER. The bill provides that the Secretary of the Interior shall place State boards for vocational education in each one of the 48 Commonwealths; he will say to them, "Gentlemen, you know the conditions in your State better than any Secretary of the Interior can know them. What I desire you to do, under the provisions of this bill, is to submit a plan to me covering every feature of the procedure you are going to follow in your State. I will apply to that plan certain general ideas as to the way in which that work can be made effective, and those general ideas will be worked out by you, according to conditions—social, political, educational, economic, and administrative—in your own State." The gentleman has asked what we mean by standards. There are certain fundamental standards in vocational education which are recognized on the part of those experienced in the work. One example is indicative of what I mean: It is a well-known fact that you can not train anybody in a vocation unless you tie together two things, practice and thinking about the practice: doing and thinking about the doing. No course of training for the machine shop, for example, can be made effective if the work is simply training in the theory of the book; it is neces-

sary that the one being trained have access to the shop, whether under the same roof or a separate roof of some commercial shop, where he gets the actual practice in doing the things he is learning.

The school supplements the shop experience by feeding in from time to time the theory, the science, the arithmetic, the drawing, the economics, the physics—everything that lies back of the work of the shop, which gives the how, while the school gives the why. And it is the combination of these two that forms this absolutely fundamental principle. What I should say would happen would be this: The Secretary of the Interior would say to that State board for vocational education, "Gentlemen, we feel that any standard you put up here for your State ought to recognize the principle that in vocational education there should run the two elements of doing and thinking about the doing." Then the State board turns around and faces all these schools that are seeking aid and says, "Here is our plan on which the Secretary of the Interior and this board have agreed, and now it is our duty to observe the practical, administrative performance of the plan." And that board must recognize local conditions; if it is an agricultural region, then it will provide agricultural training; if a textile center, it will be textile training; and so on. You put up your plan to us, and when we have agreed we are ready to certify to you from time to time for this Federal aid from the National Government.

Mr. McLAUGHLIN. Is it the idea to establish schools in a community, for instance, where the operatives in the factories will be admitted during nonworking hours and get instruction in their line of work; or is it intended to offer this education and training only to the boys and girls during the ordinary years of their school attendance and have the factory admit them during certain hours and practice on them? How are these two things to be carried on together?

Mr. PROSSER. My answer to that is that the bill, by its provisions in section 1, provides, as I pointed out yesterday, three different types of schools—the all-day school, the part-time school, and the evening school. The all-day school will be exclusively for the boy or girl from 14 to 18 desiring to fit themselves to go into a certain business or occupation or industry, whether it is to be in the home or shop. The part-time school will be for those who may come, let us say, biweekly and supplement in the school his shop or factory work. The evening school will take the mature worker, from 16 years up always, and supplements the experience he is gaining or wishes to gain in home or shop or on the farm by additional evening instruction that will give such a worker a long step forward in his calling that will lead to greater efficiency and better wage and to promotion and leadership.

Mr. MAGUIRE. It seems to me you are upsetting the whole public school system, are you not?

Mr. PROSSER. Oh, not at all.

Mr. REDFIELD. I do not regard that this bill will in any way affect the established public school system of the country. This bill opens wide the door and admits the boy of 14, irrespective of the question whether or not he has an elementary school diploma; it reaches out for the boy and girl who has never been to high school, or if they ever went there only attended for a year or two. Very few of the

boys and girls who will find their way into schools receiving aid under this measure will have had any high school education, because the ordinary high school does not offer the thing they need for their success in life. There is no danger of it affecting the high school attendance or interfering with high school organization. If in any of the States of the Union, under the terms of this bill, it was felt that the proper way to solve this problem was to provide separate departments in the regular high schools, if that way were approved by the Secretary of the Interior, those departments would be separate and distinct, as are the present commercial departments in many of the advanced high schools of the country.

The CHAIRMAN. Mr. Redfield, I would like to ask you a question or two. You asked that the fact you were a Member of Congress be overlooked for the present, and while you have treated this subject very ably from a theoretical standpoint, you know, as a Member of Congress, and particularly as a member of the majority party, that we face now a deficit of about $20,000,000; that bills are coming before all the committees of Congress asking for appropriations; you know we have already recommended a bill akin to this bill that takes $3,000,000 a year, and perhaps more—an entering wedge, I call it—and however worthy this proposition may be, however ably presented, and it has been in speeches from many viewpoints which we enjoyed yesterday, we would like to hear from you on the practical question of how we are to do this, and whether or not this Congress is going to ask that we have a direct tax to meet the necessary expenditures under all these measures, and where the money is to come from. These are practical questions that suggest themselves to thoughtful men here, and you are one of them and so full of statistics that I sometimes call you "Statistics." I would like to hear from you on that point.

Mr. REDFIELD. Does the Nation desire to begin its economy at the expense of its boys and girls?

The CHAIRMAN. Oh, no. Under the two Morrill Acts, the Nelson Act, and the Adams Act we are furnishing means to some State colleges to the extent of $60,000 a year. There is a mechanical college in my own State employing these very methods you are asking for here, and that is in a State that has been depleted by revolution. I have had two sons educated there myself, and have been in the shops where they are taught to do this mechanical work.

Mr. WILSON. I desire to say that, as a matter of course, neither this system of vocational education nor any other system of vocational education can be put into operation unless you have the means available to put it into operation. Now, the House passed recently, and the Senate now has under consideration, an excise tax bill that will provide some means more than we have been providing, and we have the still greater power to add to that and thus provide for this or for any other method of education or any other line of work that will in itself bring beneficial results, and I am thoroughly confident that the enactment of this measure and the putting of it into operation will bring a hundred and more per cent returns; that, in my judgment, makes it wise to utilize the fund obtainable from the excise tax for the purpose of putting this bill into effect.

Mr. WICKLIFFE. If the bill now before the Senate removing the tariff from sugar and the excise tax bill should pass, do you think

that the excise bill will produce more than enough revenue to offset the loss on sugar?

Mr. WILSON. I think so; yes, sir; I think it will. But if it doesn't, it then becomes our duty to furnish the means of replenishing the Treasury to such an extent that either this measure or any other beneficial measure of the same character may be put into operation. I believe in strict economy, but I do not look upon it as a method of economy to refuse to expend money in a manner that will bring our people, who have to meet the taxation, 100 per cent and more on the investment.

The CHAIRMAN. Well, you know you can not spend money when you haven't got it.

Mr. REDFIELD. Mr. Chairman, I want to attack that question of economy very squarely. I am very glad you ask the questions you have, very glad, indeed, that you have asked them.

I appreciate, of course, that we are a poor people; I realize and appreciate that we have got a tremendous debt; that our debt of $950,000,000 is so great as compared with the debt of eight thousand millions of France as compared with our power to pay; and that our interest of 2 per cent is so great as compared with the 4 per cent that France has to pay; that our poverty as a nation is such that we are not able, with our debt of nine hundred millions and our 2 per cent interest, as against the eight thousand millions of France, with her 4 per cent, that we are not able, I say, to provide for our boys and girls as France does.

Mr. WICKLIFFE. Then, you advocate the issue of bonds for this, do you?

Mr. REDFIELD. I would like to finish, please; I will take that up presently.

I appreciate also, Mr. Chairman, that our 90,000,000 of people and our limited and unfertile territory make it impossible for us to care for our boys and girls as well as Germany, with her smaller and less fertile territory, is caring for her boys and girls. I realize that if the question of economy is to be raised, if by economy you mean refusal to spend money for such a purpose, that it is one of the most fallacious and absurd positions that could possibly be taken in this matter.

The CHAIRMAN. Now, Mr. Redfield, you are talking to men who know the resources of this country, and your irony doesn't apply.

Mr. REDFIELD. You let me finish and see if I can not apply it. I am taking the ground suggested by the chairman that economy in this country forces us into the position where, because of economy, we are not able to do for our boys and girls what the other nations of the world are doing to-day, and that position, I believe, from the statement I have just made, is shown to be absurd. We are able to provide for our boys and girls to-day just as the weaker nations of the world are doing, and the question as to whether it should be done by taxation or by the issue of bonds is a wholly immaterial question beside the much larger question, Shall it be done; ought it to be done? Are we going to be content as we are? If we are not content to remain forever as we are, then the question is merely how and not whether. It is absurd and we all know it is absurd. We all know that it is right to take care of our boys and girls, and if we have not the means we can easily get them.

Mr. TALCOTT. The national debts of some of the European countries you have mentioned include a great deal more than the national debt of the United States; the debts of our States are not included in our national debt, while they are included in the national debts of these other countries.

Mr. MAGUIRE. It seems to me this bill ought to be before the Ways and Means Committee.

Mr. REDFIELD. No; I think this committee ought to determine whether this measure is right and wise, and then it will come squarely up to the Ways and Means Committee.

In answer to Mr. Talcott I will say that the debts of the municipalities of France are not included in the eight thousand millions of public debt.

Mr. TALCOTT. But the expenses incurred by the large cities and the States in this country with European countries are included in the national debt.

Mr. REDFIELD. That may be true, but you may even add together all the debts of the States of this country and the total would not equal one-third of the debt of France.

There was one thing more which I had forgotten. I do not think the question of money is a serious matter, Mr. Chairman. I was not brought up to believe that the absence of spending money was economy; I believe economy is wise expenditure, and that the miser is no economist.

The CHAIRMAN. But how are you going to spend money when you have not got it?

Mr. REDFIELD. You know, Mr. Chairman, and I know, that if this money is needed it can be had. You and I know this, Mr. Chairman, and we don't need to go any further to prove it, that if we were to-morrow informed that the State Department thought it necessary to do what the papers say we are about to do, that is, intervene in the affairs of Mexico; if we were to receive word to-morrow from the President that $10,000,000 was necessary for war he would raise it and not worry about it a moment.

The CHAIRMAN. You can not think the case is analogous?

Mr. REDFIELD. I think the matter of providing for our boys and girls for life is vastly more important than war.

The CHAIRMAN. If we had no system of education I think we might look at the matter as you do; but I have shown you where many of the State mechanical schools are receiving from the National Government as much as $60,000 a year.

Mr. REDFIELD. Mr. Chairman, you are entirely right, but that is only a half truth, for not one dollar of that money ever went to train a boy who went to work in a shop as a trained mechanic. Show me where any State provides a dollar for the training of a boy so he will be able to go into a shop and be recognized as a first-class mechanic.

The CHAIRMAN. I have just told you that we have such a mechanical school in my State.

Mr. REDFIELD. But it doesn't turn them out trained mechanics, ready to go into the shop. There is no such institution, and we are falling behind for the lack of it.

The CHAIRMAN. While you are speaking of money, let me say that this money you are asking for here in the bill would be but a mere

bagatelle to the amount of money that will be necessary to teach these mechanic arts that you contemplate here in this bill.

Mr. REDFIELD. This money is but the beginning of the expenditure on the part of the National Government, but it is limited and well within the easy resources of the country to induce States to take up for themselves this great work which has heretofore been left undone.

Mr. MAGUIRE. In my own State university (Nebraska) we have both a secondary and higher education in the mechanic arts, and they turn out just as good men as can be turned out from any other mechanical school. And I take it that that is true of the other State universities. It is so in mine, and I know what they have done, for I graduated there.

Mr. PROSSER. What you say is true in the sense that those schools do fit men on the technical and theoretical side of this work.

Mr. MAGUIRE. No; I mean they turn out practical men.

Mr. REDFIELD. How many?

Mr. MAGUIRE. All the boys that want to come in from the graded school.

Mr. REDFIELD. But it doesn't turn out enough men, does it?

Mr. MAGUIRE. Certainly not; no school is turning out all that are needed.

Mr. REDFIELD. I would like to repeat the statement that those are not the type of men that are most needed, however. Those are men—and I have employed lots of them—that I put in as engineers or as assistant engineers or foremen. The boys who at 14 years of age leave school comprise 80 per cent of all our boys in New York, and they have no place in this great country where they can learn to be first-class mechanics.

Mr. WHITACRE. Isn't the reason the lack of financial means?

Mr. REDFIELD. Only partly so.

Mr. WHITACRE. Isn't it generally the only reason?

Mr. REDFIELD. No, no; there is no place to teach them. This bill will provide for just such places.

Mr. WHITACRE. Do you mean to say there is no place for a boy of 14 to get this education you speak of if he has the money and the disposition, too?

Mr. REDFIELD. To get the practical kind that I refer to; no.

Mr. WHITACRE. This mechanical education as taught in the technical schools?

Mr. REDFIELD. Well, I would be glad if you would tell me where there is a technical school that takes this particular type of boy who aims to become a lathe hand or a planer hand or a vise hand and teaches him.

Mr. WHITACRE. All right; I have a boy who spends three hours every day making patterns.

Mr. REDFIELD. In what school is it?

Mr. WHITACRE. Case School, Cleveland.

Mr. REDFIELD. The head of that school is one of the directors of this national society for the promotion of education and is in the most thorough sympathy with this bill, because his institution does not provide the kind of education that this bill aims to provide.

Mr. WHITACRE. What is he getting, then?

Mr. REDFIELD. I don't think you understand the difference between the two kinds of teaching. My son will go to a technical school; I'm

going to send him; but he won't come out the kind of mechanic I want to employ in my shop. But my servant's son and the sons of the men in my factory, the men lower down the line, you don't find their sons in Case School.

Mr. WHITACRE. It is because their parents haven't the money to send them there.

Mr. REDFIELD. Partly so.

Mr. WHITACRE. Isn't it altogether the reason?

Mr. REDFIELD. No.

Mr. WHITACRE. It is in my country.

Mr. REDFIELD. The product of the Case School and of the Pratt Institute and all these schools of that class—and the heads of all of them are directors in our society—the product does not fill this demand I am talking about at all, and if you were to put a thousand more schools like that in this country, schools of a class with which this bill has nothing whatever to do, and does not aim to have, we would be just as pitifully bad off as ever.

Mr. WHITACRE. What about the manual training high schools?

Mr. REDFIELD. I have personally given machinery to help equip one of the most magnificent manual training schools, but a boy doesn't become a mechanic by going through the course of a manual training school; that is a fundamental misunderstanding of the whole subject. This bill does not provide for manual training school education; it has nothing to do with manual training. This bill provides for vocational training, so that the boy now having no chance at all—not your boy nor mine—but the boy having no show at all, will have an opportunity to get the training which will give him a show. Please forget that this measure has anything whatever to do with manual training; forget that it has anything to do with technical training, for it does not; it doesn't touch that field at all.

Mr. MAGUIRE. Then I am pretty well confused on definitions.

Mr. REDFIELD. Well, I am very glad to have you say that. I found that I was for a good while, and it is highly important that we get it straight, for manual training is not vocational training.

Mr. WHITACRE. If a boy goes into a manual training school and is given a plane and a saw and a hammer and is taught how to use them, what difference does it make whether you call it vocational education or manual training, if he learns how to be a carpenter?

Mr. REDFIELD. Because he goes into a school and is given a plane and a saw and a hammer does not always make him a carpenter.

Mr. WHITACRE. Well, what is the use of giving him these and the training if it is not going to make him a carpenter?

Mr. REDFIELD. That's just the situation we aim to correct here. If I were a young man and went through such a course I might learn a certain manual facility with those tools, but you would not employ me as a carpenter.

Mr. WHITACRE. I don't mean to say that I am opposed to the proposition, but I do believe it is the lack of means that keeps boys out of the high schools where they could get this sort of training; it is the demand of the parents for the services of their children that deprives many of them of this education.

Mr. REDFIELD. Partly so.

Mr. WHITACRE. Isn't it altogether so?

Mr. REDFIELD. No; only partly so.

Mr. WICKLIFFE. Will you just take the 14-year-old boy and explain, under your theory, how this would be put into practice?

Mr. REDFIELD. Well, suppose we take the case as you will find it in Cincinnati to-day. Dr. Prosser can give you details; I am only a factory man, speaking from the need side. But in Cincinnati to-day the boy leaving school at 14, or thereabouts, is put into an institution where he gets the theoretical training, not in techincal studies of mechanics but in the theory of doing the daily work which he does. While this theory is being taught in the school half of the same day he is employed in the shop doing the things about which he has been studying the theory, under the supervision of foremen, and if you were to ask the manufacturer in Cincinnati what he thought of this system he would rise up and call the man blessed who evolved the idea. There the school and mill are working side by side, and the boy is learning the how and learning the why side by side, doing the work.

Mr. WICKLIFFE. And it will send him out a specialist at a comparatively early age?

Mr. REDFIELD. It will save just about 10 years of his life.

Mr. WICKLIFFE. And without this system proposed in the bill, this can not be done in any school in the United States?

Mr. REDFIELD. No. Three ways are provided by the bill. If a boy's parents can not afford to send him to school all day he can enter the part-time course, and helps them afford it, because his productiveness is so much greater. That boy may study from 14 up in one of these schools and be able to enter my shop a full-grown mechanic, ready to earn a man's wages, fully 10 years sooner than now. When a boy can spend only half his time in school and the other half working, he is earning something. The manufacturers in Cincinnati pay these boys for the work they do in their shops. In my own factory I will differentiate and pay higher wages to the boy who spends a part of his time in the shop and the other part in school.

There is one other point I would like to mention, although it is a subject I am not supposed to know anything about. If we can provide domestic education whereby the mechanics of our country will save the frightful cost of the waste that takes place in their homes we will have immediately added to the efficiency of this Nation from 15 to 20 per cent.

The CHAIRMAN. Mr. C. A. Cotton is here and would like to be heard now, as he must catch a train.

Mr. WILSON. I believe Mr. Smith, of Michigan, has a letter bearing on this subject which he would like to present.

The CHAIRMAN. I have told him we would be glad to have him do that; but Mr. Cotton is obliged to leave at once, and we will hear him now.

STATEMENT OF MR. CLARENCE A. COTTON, OF DUBUQUE, IOWA.

Mr. COTTON. As the former first secretary and afterwards president of the American Association of Commercial Executives I have had a good deal of experience with school, chamber of commerce, and board of trade work. I had something to do with inaugurating the Journal of Commerce in Chicago, the Board of Trade Journal in

Grand Rapids, and the Journal of the Industrial Corporations in Dubuque.

I have heard all this discussion here this morning and was interested in the seeming misunderstanding of our friend on the opposite side of the table [Mr. Whitacre] as to the difference between vocational education and manual training. I think this will illustrate the point: I can remember very well when I was a boy—and I have always had to earn my own living since I was a boy 15 years old—when I used to hang around the corner grocery, where there was always a crowd, and one old fellow used to come along and pat me on the head and say, "Now, Clarence, what are you going to be when you grow up?" and he would run over a long list of trades and professions; but how did I know what I was going to be?

Now, every Saturday morning we have a class of the sons of the members of our organization, and in order to have the thing so we could handle it we allowed 50 boys to join whose fathers were not connected with the organization. We would have allowed more if we could have gotten them to come around every Saturday morning. For example, I will give you an illustration of the way we started the instruction of this class: They went to the foundry and saw some castings made; the boys would not be allowed to go into the foundry alone, so they were in charge of a captain and instructor giving them the lesson. They saw these castings made. The next week they went to a large machine shop and saw these same castings put into machinery. The next week they went to a large printing and publishing house and saw the catalogues where this product was advertised; and the same procedure applies in the woodworking lines, etc. This method of learning was so practical and so successful when carried on in this way that it has seemed to us so good and so big that it is up to the General Government to take up the plan and put it into effect all over the country.

As for the question of finances, that mould seem to be a matter for the committee in charge of such things; but if this is a good thing it should be carried on. We shouldn't be like the man who, because he couldn't afford it, thought he would economize by not taking out any fire insurance on his business and then in a few days found himself burned out.

I want to read this letter from one of the larger manufacturers in Dubuque. [Reading:]

DUBUQUE, IOWA, *April 17, 1912.*

C. A. COTTON,
Secretary Dubuque Industrial Corporation, Dubuque, Iowa.

MY DEAR MR. COTTON: I have your letter of April 15 in which you refer to a bulletin sent out by the National Association of Manufacturers concerning the Page-Wilson bill.

It probably is no news to you to be told by me that the municipal affairs committee, the board of education, and many other organizations are very much interested in this particular subject. In the board of education we believe that the extension of vocational training is the biggest problem that we have before us at the present moment. This is not a problem to be solved in the future but one which is to be solved now.

The State of Iowa agriculturally is practically completely developed. We have fewer acres of waste land in the State of Iowa than in any State of the Union. Practically every acre of tillable land is already under cultivation. This situation can mean but one thing, namely, that while the productivity of the soil may be increased by scientific methods, the natural resources of Iowa shall never increase in any large measure from this time forth. An increase

will largely be the result of the education of the farmers who are already tilling the soil up to better methods.

But Iowa must grow, and it surely will grow. It will grow through its manufactures. Manufactures of Iowa at the present time, as you know, are a negligible item as compared with its agricultural resources. We must therefore get busy on our factories and get busy at once.

More factories will increase the population of the State; they will increase the per capita wealth of the State; they will increase the importance of the State.

Bue even in Iowa and in Dubuque, with its small manufacturing population, educators have already arounsed themselves to the need of industrial training for the workers who are to go into our factories.

That is why we have started the Junior Industrial Corporation. It is for the purpose of vocational guidance largely. We want to enlarge on that. The Junior Industrial Corporation is only the beginning.

I would therefore suggest that when you go to Washington you take it upon yourself to serve not only the industrial corporation but the city of Dubuque and generations to come in furthering this cause of Federal vocational training. The arguments set forth in the bulletin of the National Association of Manufacturers, commenting on the great disparity in funds placed at the disposal of the agricultural interests, as compared with the manufacturing interests, are absolutely sound according to my way of thinking. The United States Government should spend something in educating people who are going into manufacturing pursuits just as it is spending money on the people who expect to till the soil.

You will note that the Page-Wilson bill aims to instruct "all the children of all the people not only in their trades and vocations but in the essentials of citizenship in town and country." Surely no commercial club in the country will oppose a bill of this nature. This is the kind of education that we are most concerned with. As a matter of fact the Dubuque Industrial Corporation and most of the boards of trade are doing only a little work in their accomplishment. Their big work consists in educating the people in the "essentials of citizenship." That is our big job, as a matter of fact, in the municipal affairs' committee. By educating we gain new recruits. People who were opposed to our project a year or so ago are now warm adherents of it.

The Page-Wilson bill points the way to what might further be accomplished by cooperation between the Government and commercial organizations, as it proposes to do through the Government what commercial organizations now are not only endeavoring to do but are actually doing in so far as they possess the funds and in so far as they secure the support of their communities.

Yours, truly,

F. E. BISSELL.

Mr. WILSON. Mr. Chairman, I would now like to give Mr. Smith of Michigan an opportunity to introduce a letter which he has.

STATEMENT OF HON. J. M. C. SMITH, MEMBER OF CONGRESS, MICHIGAN.

Mr. SMITH. Mr. Chairman, I have come here in compliance with a letter I have received from Mr. D. B. Waldo. I would like to file the letter, which is in favor of the bill. I would also like to say that I am in favor of the bill. If you need the money let us raise it by putting the tax up on cigars and cigarettes, snuff, chewing tobacco, and whisky, and fill up the Treasury in that way.

WESTERN STATE NORMAL SCHOOL,
Kalamazoo, Mich., April 19, 1912.

Hon. J. M. C. SMITH, M. C.,
Washington, D. C.

MY DEAR MR. SMITH: I understand that the Page bill (S. 3) has been introduced in the House of Representatives (H. R. 21490) by Congressman Wilson of Pennsylvania, and there is a possibility that the bill may be passed at this session of Congress. This bill, as you know, includes a much-needed item for the support of technical training in normal schools, and I trust, now that the time is so close for a hearing, that you can give an extra boost.

Yours, very cordially, D. B. WALDO.

The CHAIRMAN. Tobacco and whisky are bearing all the tax they can stand now.

We will have to adjourn now and this question will be taken up again to-morrow.

Thereupon, at 11.50 a. m., the committee adjourned to meet at 10 o'clock a. m. Thursday, April 25, 1912.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, D. C., April 25, 1912.

The committee was called to order at 10 a. m., Hon. John Lamb (chairman) presiding.

Mr. WILSON. Mr. Chairman and gentlemen of the committee, I wish to state that on account of important matters coming before the Committee on Merchant Marine and Fisheries this morning that it will not be possible for me to be present during the entire hearing, and Mr. Holder will present the names in the order in which they will be presented to the committee, and I want to ask that at the conclusion of the hearing this list of newspapers and periodicals and national organizations and institutions, local organizations and prominent citizens, including governors, and other people, who favor the bill be included in the record of the hearing, and that these communications from various persons and institutions favoring the bill be included.

The CHAIRMAN. The lists you suggest are all right, but the communications would probably be too voluminous.

Mr. WILSON. I will be glad, Mr. Chairman, to simply brief these letters and other communications in order to make the record shorter, if the committee will permit.

The CHAIRMAN. That will be satisfactory, and they will be printed.

Mr. WILSON. I will now present Mr. Ball to the committee.

STATEMENT OF MR. BERT BALL.

Mr. BALL. Mr. Chairman and gentlemen of the committee, I am secretary of the crop improvement committee of the Council of Grain Exchanges, which consists of 20 of the largest grain exchanges in New York and all the important cities having such an exchange.

The CHAIRMAN. I thought you were in the option business.

Mr. BALL. No; I have nothing to do with the option business. Our principal business is in regard to production rather than speculation. We have nothing to do with the option business.

About two years ago in our meeting of the Council of Grain Exchanges in New York City, which is a representation of all the grain exchanges in the United States, the question came up as to where seed of any kind can be had in carload lots. We discovered there was no such thing as getting a carload of any one variety of seed, which resulted in a seed-improvement committee, which was afterwards broadened out and make a crop improvement committee, which includes the work of the railroads, the bankers, the agricultural organizations of all kinds, the commercial clubs, and so on, in the communities, until we have now under this committee's work a sort of joint arrangement with almost every line of trade represented

by the different agricultural interests of the United States, and, sir, all now working to this one point.

The Bureau of Plant Industry under Dr. Galloway is one branch of which we approve, and in which we are in close accord, and that is in the work of the farm management where they put a manager into every county and leave him there on the job to study local conditions and become the adviser and the friend of the people of that community. We have found that we can not make any progress as grain men in the way of matters of yield of bushels, either in quality or quantity, until we go back to the first principles, and as we go back there we believe that every man, woman, and child in the United States is endeavoring to accomplish the same identical purpose. We have made a study of the communities, and we have raised a fund now which exceeds a million dollars for the purpose of carrying on our work. Our idea is to install a paid agriculturist on the job, so that we may have a sort of headquarters for all of us to work. The great difficulty has been not in raising the fund. We believe the business man all over the United States is always ready and eager to do anything which looks like business. We can demonstrate very easily the fact that there is a million dollars to be had in any county of the United States annually, which has never been had before, added to the annual output of that county. That is very easy to demonstrate. For instance, we have introduced this year through the superintendents of schools by cooperation with them, the right idea of testing corn, which is just one instance. You take the average corn community in the grain belt, and you find we have a 100,000 acres of corn. By seed selection alone it has been demonstrated over and over again that the crop can be largely increased, and we claim, just for the sake of argument, that the yield can be added to simply by knowing the corn is alive before it is planted. That is one little thing. Another instance, the school children of the public schools get the seed corn from various farmers and bring it into school and germinate it. Over half a million children are doing that.

Suppose in a 100,000-acre county, where there are 100,000 acres of corn land that can increase the yield 10 bushels per acre. There is 1,000,000 bushels of corn added to the annual output of that community which has never been known before, and at 50 cents, which is a very reasonable price for corn, we have added $500,000 to the annual output of that county by 10 days' work through the children. And they have learned a principle which is even more important than that. Much as I indorse the idea of the corn clubs throughout the country, I believe that the corn clubs do more good to the men interested in those clubs than to the children. Here is the situation.

The CHAIRMAN. Are you speaking on this bill now?

Mr. BALL. Yes, sir: as to its application. We are ready and willing—and we have the agricultural interests of the United States back of this proposition—to put a man in every agricultural community in the United States, both in connection with the Government and independently. This man may or may not be under the control of the State college. He must be appointed by or satisfactory to the dean of the agricultural college.

The CHAIRMAN. Pardon me, but you are speaking on this demonstration of the work of the farmer, and we have already passed a bill in this committee known as the Lever bill.

Mr. BALL. I know; I am familiar with that.

The CHAIRMAN. Carrying that idea out. That increases the planting appropriation to do that same work in the South. This is a mechanical as well as an agricultural bill.

Mr. BALL. I understand that; but here is the point: We claim that half the colleges that ask for men to do this work can not get them, because these men are not available. There is no college can give us the work for these communities. With one or two exceptions we can not get them. Therefore, my argument is this: That the business men of the world are willing to support these men; we must have Federal aid to supply these men and give them a practical knowledge to get this half million or million dollars additional that is in these communities. It is a business proposition. We ask to have these men trained and to give us some source of procuring these men.

There is one more point. The tendency has always been, as we all know, for the boys to leave the farm and go to the city, but I can see how the signs of the times point to this. Princeton College already has a farm started where boys can work their way through college. That is one of the most famous colleges of the country, as we all know. Wellesley College started it. The time has come when every high school wants a little farm of its own. We have no teachers to teach teachers, and that is why we ask Federal aid in this bill.

I will not take up the time of the committee any more, but this is the point I am after: We are perfectly willing to pay the expenses of this farm bureau department, but we ask Federal aid to get the men to take these jobs. Some of them are worth $4,000 a year. I know one place particularly in Illinois where they had to get a man from Urbana, and they paid him $4,000 a year. He was a good man, and I know other communities where they will pay two and three thousand dollars a year, but we can not get these men to put in there on those jobs.

Yesterday the point came up, Where are we going to get the money to do this? I pointed out that in the average corn community the children alone in 10 days can add a half million dollars to the annual output of that community. It is a matter easily demonstrated. That is the only thing I have to present to this committee, that we must have some way to get these men, and I do not see it in the Lever bill.

Mr. HOLDER. I will now call upon Dr. H. W. Brewster, who is the principal of the school of agriculture in the University of Minnesota.

STATEMENT OF MR. H. W. BREWSTER.

Mr. BREWSTER. Mr. Chairman and gentlemen of the committee, my observation and experience come from the institution in which I labor, and I speak from that standpoint. But during the 12 years of my experience there our growth has shot out and connected with every feature of education mentioned in this bill, and so I see it through the eyes of the man who had his experience in connection with the agricultural end and also in connection with that of domestic

economy. I sympathize with every man who wants to see every dollar that is appropriated go where it belongs and do good work. For 12 years I had to talk to the Legislature of Minnesota and got accustomed to showing them where every dollar went.

I would like to say, first, that before the Hatch bill was passed the work of the colleges of agriculture and mechanical arts under the Morrill bill did very little for agriculture but a good deal for arts. The mechanical arts got way ahead, from the college standpoint. But under the Hatch bill these experimental sections were created and a corps of expert agricultural scientists, and then the agricultural end came in and Minnesota established her school of agriculture, the first school of agriculture in the United States, directly after the Hatch bill was passed.

Our work was in the dark, and at first we had only a little wooden building large enough to board 50. We went to work, and the first year registered 47. Our boys were taught mechanical work. We taught them enough carpentry so they could do their own building, and some blacksmithing to repair their machinery. To get our teacher in blacksmithing, we had to go out and hunt for him, and we had to go to a trade school to get him. We had to get a man from the trade school, and so we got connected sympathetically in our trade school by getting this teacher for our blacksmithing. In carpentry we had plenty of teachers.

The CHAIRMAN. How long ago was that?

Mr. BREWSTER. In 1888. The Hatch bill started the work in 1887, and in 1888 we started this school. We worked four years, and then the girls came clamoring to come, and we started with the girls in the summer, and we proposed to learn what work the girls could do. We found out that one-half of our course of study planned for the boys of a high-school course—a course of four years, finishing up mathematics and literature and going into the technical work—we found one-half of that could be done by the girls in the same classes with the boys. The girls not only wanted the mathematics and the economics and the sciences and physiology and chemistry, but they wanted poultry and dairy, and they wanted to come to the classroom, and they would take a tapeline and measure the cattle. They wanted to do it, and after awhile quite a number of them were able to carry on their own farms. The years went by, and then the farmers wanted to come. We introduced a short course for them, and we had so many applicants from St. Paul and Minneapolis for men to come and learn the trades, engineering, plumbing, steamfitting, and so on, that it was hard to keep these fellows out and carry on our work for the farmers.

After working three summers with the girls, we found we could add to their course domestic science, and then we put up a building for them and looked for our teachers. Where could we find them? They were trying to teach cooking and sewing in Minneapolis and St. Paul, but we could not find there what we wanted. We went to the Pratt Institute in Brooklyn, and got there our teacher for cooking and laundry, and it included a good deal more than cooking—a chemical analysis of the food supplies—meats and vegetables; and we put in a laundry so they could learn all the details of that work, and in addition to that we gave them, of course, the household arts. Then for our sewing teacher we went to Chicago to the Armour Institute and talked with and selected a young lady to come and

teach sewing. Her helper was a natural sewer, and we engaged her, and she is there to-day—Mrs. Blair, of the University of Minnesota—and she has made herself famous throughout the State. And let me say right here that the best tests she gives her girls, showing their proficiency, is to make their own graduation dresses at commencement time. So much for our domestic sciences and the agriculture and our work in connection with the trade schools. One feature I think I ought to mention, it was so important, and that is this branch-station work the first year we started our work. The Hatch bill went into operation in 1887 and we commenced in 1888. Agricultural experts are not very expert after one year's study, and the men who come to us graduates of agricultural colleges have had very little practical work. One of them was Prof. Green, who is now dead and who came from Amherst, Mass. They were excellent men, but they had very little practical work, as I said. Our boys come from the farms and were most intelligent boys, but the problems presented were too theoretical. These boys came back next year, and these men changed their plans. modified them, and things went better. If we had not the boys from the farm the work the first four or five years would not have amounted to much, but with these boys the work went rapidly.

In this work there are a great many things that can only be started on the experiment station and that the boys must take home and apply. Breeding poultry is one of the best fields in the work for carrying on breeding, because you can get a generation every year, possibly two. Of course, there are some other lines, such as sheep raising, carrying on experiments in breeding very rapidly. But to the student the great benefit to him is getting close to nature and studying these problems, and in the strictly scientific agricultural research our school would have amounted to very little if we had not had the boys to work in connection with the farm after our institution had grown. The first year there were 47; finally it grew into the hundreds, and at the end of 10 years we had over 1,500 students, all told, in both school and college courses. Our work in the college had multiplied. and there was a special school started at Crookston, and there was a farm of 500 acres in connection with that school, and the students are there studying in that school and do a great part of their work out on the farm and apply the more strictly technical and scientific work.

I have shown to you as briefly as I can how the government of our work shot out into all these branches. I do not wish to occupy your time longer, unless you have some questions you would like to ask, and I will attempt to answer them to the best of my knowledge.

Mr. McLAUGHLIN. When did you legislature make its first appropriation?

Mr. BREWSTER. The first winter we started. We started in the fall; October, of 1888.

Mr. McLAUGHLIN. How much money was appropriated?

Mr. BREWSTER. They appropriated $25,000 the first year—more than doubled our equipment.

Mr. McLAUGHLIN. And more or less appropriation has been made each year since that?

Mr. BREWSTER. There was one year when there was a scrap on the question of separating the agricultural college from the rest of the university, it had been so satisfactory. The next year we needed

a dairy building, and the governor of our State advanced $20,000 out of his own pocket to have them take care of that building, and after that we got our appropriation.

Mr. McLAUGHLIN. Approximately, how much each year?

Mr. BREWSTER. We started with $25,000, and it has run up, and they have given us $250,000 in one winter when they wanted a large building.

Mr. McLAUGHLIN. But for the branch of the work that you have been describing, how much was appropriated?

Mr. BREWSTER. The college of agriculture there has possibly one-tenth of its men and one-tenth of its money in the college work proportionately, and nine-tenths in this school. The work that is done for the boys in the high-school course is ten times what it has done in the college of agriculture. Let me tell you what the attendance is; that will perhaps answer. I will take our growth right up to 1910. In the four-year course in the dairy school they had 107, in the short farmers' course 230, the rest in the school proper, making a total enrollment of 1,500, and in the college 285 for 1910. The total enrollment was 1,607, the total in the college being 412. Approximately one-fourth; I got the percentage too small. There was not a fourth as many in the college course as in the school course. That $250,000 building was planned for a good deal of the work of the college course and the school course. The appropriations are not separate, but the only way to estimate it would be by the number of students in the different departments.

Mr. McLAUGHLIN. I do not speak for all the members of the committee, simply for myself, but I think this question might come up in the minds of most of the members: Not the great value of this work or the great need of it, but why the General Government should do it? We would like to hear you on that very briefly, because we must be brief.

Mr. BREWSTER. I would like to say that Minnesota started out back in the seventies to improve its high schools. It was very difficult to get the local high-school boards to appropriate, and Minnesota said, "If you will put $500 in your high school and admit a course to get to the State University, we will give you $500," and other States did the same, and Minnesota soon had 75 high schools giving good, strong courses to provide for the university. If the State had not put that money in the local schools, the local schools would not have appropriated. If you will put in so many thousand dollars into this work that is so needed, we will put in so much if you will put in the same amount or more. In this way we will say to the Federal Government we will have the appropriation that it makes multiplied at least by three. Some States will only match what you give them. Some States will put in two or three times as much as you will give them to carry on the good work. In my estimation that is a good reason for the Nation giving money to the States. It will encourage the States that otherwise would be backward to get in the procession, and they will make their appropriations, whereas otherwise they would not make it for years, if there was not some incentive put in that way. Perhaps in your own State you can look back and see where the State gave an appropriation for the high schools if they would establish a course of study that would fit the boys for the

higher university and appropriate a similar amount. Nearly every State did that. Our State did it back in the seventies.

Mr. McLAUGHLIN. My State of Michigan? I do not remember any appropriation being made just in that way, although millions of dollars are going from the State treasury directly to the schools.

Mr. BREWSTER. The State held the privilege of withholding if they didn't bring the course of study up. In that event they would not give a dollar, and the Nation would have to do the same and see that the board matched its standard and matched its money and appropriated it under satisfactory conditions, the members of the Cabinet being the judges. The fruitage of the Hatch and Morrill bills shows what national appropriations will do.

Mr. HOLDER. I would like to call upon Mr. N. P. Hull, master of the State Grange of Michigan.

STATEMENT OF MR. N. P. HULL.

Mr. HULL. Mr. Chairman and gentlemen of the committee, I am here more especially to represent the National Grange. I am a member of the National Grange legislative committee. I am going to be very brief with this. I may say to you that representatives of the National Grange appeared before this committee and gave testimony favoring provisions of the Lever bill, and in so far as the Lever bill coincides with the bill before you for your consideration, the same arguments would apply to this bill that apply to the Lever bill. Of course, as farmers, as representatives of the grange, we are specially interested in agriculture—interested in those things that shall help to build up a better agriculture or better farmers.

By action of the National Grange for several years past—I have not in mind just how many years—we have indorsed the provisions of the Page bill—I believe ever since Mr. Page had this bill under consideration. Now, you may wonder why we, as a grange, prefer the Page bill rather than the Lever bill. There are two or three reasons for this. In the first place, we think it is just as essential that the girls in our farm homes shall be trained to be home makers as it is for the farm boys to be trained to be farmers, and we are just as much interested in our girls as in our boys, and we think it is not giving the girls a square deal if we take a step in advance without giving them just as much consideration as our boys.

The CHAIRMAN. The Lever bill, I think, covers that.

Mr. HULL. Does it cover it to as large an extent?

The CHAIRMAN. Yes.

Mr. HULL. Also in the preparation of teachers?

The CHAIRMAN. No; I do not think so.

Mr. HULL. That was a point I wanted to bring up in regard to the girls and also in regard to agriculture. In Michigan—I am a little better acquainted with Michigan conditions than I am with those in other States, although as a lecturer of the National Grange and some other organizations I have traveled over a good many States and lectured in the farmers' institute work in a great many farming communities, so I am acquainted with these things somewhat—we are satisfied that our schools must broaden out if agriculture is to get a square deal. Take the farm boy to-day and send him to a rural

school and he graduates from there and goes to the high school, and he graduates from there, and you have not even intimated to him that there is as much room for brains on the farm as there is in other lines of business, and with the many courses that must be mastered to-day if a man is to be a successful farmer there is just as much room for brains on the farm as in any other business, and I believe there is no business in the future that is going to require as broad a mental equipment and as much practical knowledge as the business of handling a farm successfully.

The question came up here—and while it is in my mind I want to refer to it—why the Nation, the Federal Government, should assist in this work. In the first place, it is a national question. History has proven as long as history has been written that where the people of a nation are well fed that nation went upward, and when they were not so well fed and well nurtured they went down in the scale. Either we must teach these farm boys and farmers how to make their acres produce more in the future than they have been producing in the past or we must teach them to be soil builders rather than to be soil miners. And this wonderful prosperity of ours, our wonderful national prosperity, that has come through agriculture, has come because the farmers of this country have been mining the fertility of the best land that God has given us. It has not been farming so much in the past as it has been mining. But we have gone on with that mining process about as long as we can, and now we must change our system and become soil builders instead of soil robbers, and to do that, with the many influences that enter into that, to be able to build your soil and protect yourself against the many diseases and all those things that are the natural enemy of soil fertility and soil production, and at the same time provide for the farmer's family, or provide for his old age, requires considerable judgment and considerable mental capacity, and all that he must have. If this Nation is to go on to its full growth, as it must assuredly go on, it will be because this Nation takes hold of this question and assists its farmers to produce more, so its people may be well fed. So I say it is a national question.

Just a little further on that point in the way of getting this matter started. Chairman Lamb said yesterday where would the money come from, and spoke of the matter of economy. I can realize that is a very pertinent question here, Mr. Chairman. You probably appreciate the fact that to get the States to appropriate money for a new thing like this is as large a question with the men who have charge of the appropriating power in the States as it is here in the Nation. Taxes are high in the States, and they say they don't know where they are going to get the money. But this is something that must come, and as my friend from Minnesota here just said, if you can give a little that will help to encourage them to start this work it will multiply itself in the States, and each will have done its part, I believe, and inasmuch as we have a great respect for you and the State authorities have great respect for you, it seems to me it is wise and proper that this small amount should come from the National Government.

I will not take much more of your time, Mr. Chairman, but I have just one other thought here. In the work we are striving to do in Michigan—we are doing a little of this work there—we are handicapped for the want of teachers. We would like to have agriculture

in our rural schools, but the question is, where are we going to get the teachers to teach this? Our Congressman, Mr. Smith, showed me a letter from one of the principals of our normal schools. I know some of the work they have been striving to do in Michigan, and I know they have been unable in that school to do the work they would like to do in teaching agriculture to their students who are to go out to the rural schools to be teachers.

This principal spoke of the fact that if we could get some encouragement from the Federal Government we could persuade our State to make some of the appropriation. There is no one thing we would rather do, no one avenue that we see that has as great a promise in it, than along this line to instruct the teachers to go out to the rural schools that they may be able to instruct their pupils in the schools in which they go. This bill takes care of these things, as I see them; and in regard to the trade schools, while we are not personally interested in that advantage, I can see no reason, and the Grange can see no reason, why the boy in the city who needs the training for his life work, that training which will make his work more valuable to him and more valuable to the Nation, why he should not have the advantage of that education.

The CHAIRMAN. Let me say to you this, since you recalled something I said yesterday. You go through you own State and through other States lecturing, as you lectured here this morning since I came in—I did not hear all your remarks—and your people will think from your remarks that this country is not doing anything for the agricultural work and the demonstration work at all. They do not know, and you do not stop to tell them, about the Morrill Act, and the Nelson amendment, and the Adams Act, and all those acts. You do not tell them this Federal Government is spending $15,000,000 a year in agricultural work, sending out millions of bulletins. You do not tell them that these States receive $60,000 a year for agricultural schools. You do not tell them that even a State like yours has got an agricultural college in each congressional district and public schools that are teaching these people agriculture.

Mr. HULL. We very frequently speak of the things the Federal Government has done, and we mention them with the greatest respect, but, Mr. Lamb, take it in our State—I know but little about your State—but take it in our State, the things that you are doing for agriculture, while they are splendid, and all that—you are doing a great deal for our agricultural college and you are fitting young men there to take up agricultural work, the work of the different experiment stations, and so on, but mighty few of them after they get through with that work find their way to the farm, and mighty few of them can be had for teaching agriculture in our common schools and in our high schools.

The CHAIRMAN. I have not the time or inclination to discuss this question except to refer to the money feature. That is a serious part, and we are charged with the responsibility of seeing that the public money is rightly expended. We are not a debating society, nor are we here to listen to people lecture. What we want are the facts.

Mr. HULL. I did not intend to criticize what you said yesterday: I said that was a serious question. There is no question at all about that. I did not mean it in the matter of criticism, but from the

viewpoint of the Grange we feel that, while we are all for economy, that this was a place where a reasonable expenditure of money was going to be a matter of economy. No criticism was meant at all.

Just one further thought here that has been brought up. The work of the Hatch Act, and these other lines of work, have brought out a great deal of most valuable information, and with this bill, as with the Lever bill, what the farmers need now is to get that information. It is not necessary for me to dwell upon that, because, as I understand it, this committee is in sympathy with the Lever bill. Unless there are some further questions, that is all I have to say at present.

Mr. HOLDER. I will now call upon Miss Emma S. Jacobs, director of the public schools in Washington and a member of the American Home Economics Association.

STATEMENT OF MISS EMMA S. JACOBS.

Miss JACOBS. Mr. Chairman and gentlemen of the committee, I am a director of the domestic science and home economics work in the public schools. I have come to speak more especially for the home economic work, for which provision is made in the bill under consideration. Home economics I would like to define, or tell what is meant by that. Under this term are embraced questions concerning food, clothing, shelter, economics of buying, spending and use, and the care of children, and these things are all taught—all questions concerning food, buying, preparation, service, general care—and our pupils must know something of standards, so they may determine and know when an article is adulterated; underclothing, how to buy fabrics, and tell the wearable quality, or whether it is of inferior quality; about colors and adaptations of colors; how to renovate garments and understand the manufacture of garments. They must know something of this clothing. They must know something of house construction, of sanitary and hygienic conditions in and about the house, and under economics both the buying and the using. This brings up the great questions of economics, of spending by the housekeeper, to whom this work will be given. She is the great spender of the Nation. Under the care of children—how to feed them as well as clothe them; how to produce the best conditions in the home which will bring good, strong men and women for the citizenship of this Republic. A great many of our young women have said, after their babies died, "If you had only told us before it was too late." Even as to the question of feeding them they do not know very much. Now, the question is, Why should the Federal Government give any part of the money to do this teaching? Mainly to stimulate the people in the States. There are a great many people who object to this, and say it is the work of the mother in the home. Possibly and very probably it is the work of the mother, but the mother must know how to create the conditions. The mothers of to-day know very little, and the girls of to-day are not getting very much training.

Again, this work can be very much better taught in the school by a teacher, because there the sequence of the lessons will be closer and much more systematic. If the Federal Government can stimulate by giving a certain amount of money, demonstration can be made of the value of this work to the mothers of the States. Then they will

support any measure in their own States which has for its object gradual appropriation by the States for this work. There would be very little difficulty when you consider the whole question and the great masses of people being taught. It is true the agricultural colleges are training some of these people to go out, but they go to the larger cities, where the schools are consolidated, but the real essentials of the work are not being taught in the rural schools of the country.

Now, of course, the best time to teach these questions is the high-school age, when they are taking science and economy, and when they are mature enough to realize the responsibility which will be theirs when they make their homes, so they will receive the training much more readily and be able to do their work much better.

Under this bill we need the trained teacher, the teacher with the rather liberal or college education, so that we need this money for the college work, in home economics, agriculture, or special colleges. Less than 20 per cent of our children graduate from the high schools, so that these teachers in colleges or high schools will not reach the masses, and for this we need the trained teacher along these lines who will go into the rural schools, and this can only come through the regular normal school. The normal school requires for entrance high-school work of its candidate, those who have had some work on the high schools. If this work goes far enough in the normal school they can be trained how to teach the principles or the essential things about home economics right while they are teaching physiology, geography, and the regular subjects of the school. It is simply using the subjects now in the curriculum, turning them toward the home, and emphasizing the necessity for certain influences in order to have good homes and to raise good, strong children.

I have tried this line of work in the public schools of Maryland and found that just with the little book which is used in physiology in this State that very many of the principles we are endeavoring to teach in the city schools by special teachers on home economics can be taught from this little book. But they are not taught; they can not be taught to-day by those rural-school teachers, because they have not had any training. Only those of us who have had this other training can make practical work of it. As the child is the future citizen and is to be the future producer of the country, it is necessary that this child should be brought up under the very best conditions, and it is for that purpose that I hope some bill will pass through Congress within the near future giving some stimulus by Federal aid to the States.

Mr. HOLDER. Mr. Chairman, can we present Mr. H. E. Miles, chairman of the committee on education of the National Manufacturers' Association? Mr. Miles is also chairman of the Wisconsin commission on industrial education. He will present the purely trade-training side.

STATEMENT OF MR. H. E. MILES.

Mr. MILES. Mr. Chairman and gentlemen of the committee, I am profoundly appreciative of the judgment and the responsibility and the patience of this committee. I am just a business man. I know how you dislike generalities. I know how you men are held responsi-

ble for safeguarding the money of the people in the Treasury, and yet I know how, if the need is great enough, you are willing to part with that which is necessary and right. I know you dislike generalities; I do. The business man has to avoid them. I wish only to speak very briefly, but I know you will bear with me for a minute if I say, in general terms, a word or two as to the value of the expenditure we now ask. If there is to be a thousand per cent per annum returned, or maybe even 500, or 100, or 200 per cent returned, I hope the Government will not be thought so poor but that it can find this money.

I started out with the idea that manufacturers need more skilled mechanics, and I could not stop until I reached the broader consideration that the citizenship of the United States is impaired and its future endangered, if I may use the term, for lack of industrial education. We all believe in the education of the masses. Gentlemen, some of us think that the masses of the people of the United States are educated. I am afraid not, gentlemen. One-half of all the children—I suppose you know it, but the Lord's Prayer will bear repetition, you know—one-half of all the children of the United States are practically thrown out of the windows of our schoolhouses at the tender age of 14, and even earlier. They are not educated. They have only the three R's. They leave in the sixth grade, or sooner. A child of 13 knowing only the three R's is not educated. The three R's is not education. They are only the means whereby education can be acquired. They are thown out at the beginning of adolescence, and that is the time when of all times in human life education must control and direct the life of the child.

Now, all the children that go into our factories are of this class who are ejected from the school, or if you wish to say it, who voluntarily leave the school. All of the children that go into our factories are these children who leave the schools in the sixth grade. That is statistics. There are 20,000,000 children in our schools to-day, and half of them, by the best statistics you can gather, quit school in the sixth grade. The children of the native-white people of this country are more illiterate than the sons and daughters of the immigrants. That is statistics. So, if we are to have the right sort of citizenship, we must reach this 50 per cent of our children by some method of education that we do not now have.

May I look at the economic side for a moment? A child who is educated so as to use his mind and body intelligently and efficiently earns twice the money as a mechanic that the uneducated child does. Mr. Dodge, of Philadelphia, very carefully figured the matter. The best figures he can arrive at are that the child without an education in a lifetime will earn $20,000; if he has an industrial education and consequently the faculty of using mind and body intelligently and efficiently, he will earn twice that, or $40,000, in a lifetime. The difference runs in our population to billions and billions of dollars.

May I talk for a moment of our factories? Our factories are short at least $300,000,000 per year in wages. That is a good deal. It is a good deal for the dinner-pail man in these times of high cost of living. These factories are short at least $100,000,000 in returns for the stockholders to be used in expense account and profits. These two figures put together are $400,000,000 per year, and I think it would be safe to increase these figures by at least 50 per cent, and,

gentlemen, we are acquiring the habit of submitting to that condition. We have been poor now in our factories in this respect for years, and we see no clear sign of improvement.

Gentlemen the countries that have industrial education are busy. Last year Germany imported a million men to help out her busy army of industrial workers. Last year Germany sent abroad a billion dollars of money she could not use at home in the extension of her factories. We have been all these years selling raw materials. If a man sell a house and lot for $5,000 that does not mean that he has made $5,000. He may have lost by the transaction. We have been selling our natural resources that way. We have been selling brain and muscle. Our exports of manufactured products tell that as well as anything. We export about a billion and fifty millions of manufactured products. But, gentlemen, 60 per cent of that carries only 3 per cent petroleum, of which we ship a hundred millions—3 per cent of manufactured labor—and flour and meat will be included in that 3 per cent up to, maybe, 15 per cent in bar iron and bar copper and things of that sort. Our manufactures are beef and flour. That is not a manufactured product, but by classification it has to be put there; so we are simply shipping abroad crude stuff, and that is why the laborers of the country are unable to make this more refined product; that is why we are short hundreds of millions of dollars in money for pay rolls every year.

There are only four great manufacturing nations. I hope the chairman will not think I am lecturing.

The CHAIRMAN. Go ahead.

Mr. MILES. There are four great manufacturing nations in the world. We claim to be, and in some respect are, the greatest manufacturing Nation. There are three other great manufacturing nations—England, Germany, and France. There are one and one-half billion of human souls outside of these four manufacturing nations that must come and do come to those four nations for their manufactured product and pour countless billions of good money into the laps of not the four nations, of the other three nations, and those other three nations come to us, and what we ship is the raw stuff to the other three, and then they take that raw stuff as the very best of their wealth and prosperity and pass it on with $5 of labor to $1 that we put in, and they have the happiest and most prosperous industrial population upon the earth.

Now, pardon me if I mention tariff reform incidentally. We know this country is not going to have a wall around it any longer. We know that as that wall comes down stuff will come in, and for every dollar of that stuff that comes in a dollar must go out, or we are short still more in labor and pay roll. We ship this raw stuff—a hundred millions in petroleum, a hundred millions of bar copper—with no labor in it; 300,000,000 of beef and foodstuffs, and call it manufactured products; 50,000,000 of bar iron and billets, etc. We are just a huge stevedore carrying down to the ships of the sea the crude and semicrude materials, our natural resources, and we call them manufactured products. We have to get the finished products. We have to get hundreds of millions for our workers in addition to the few pennies we are now permitted to put into these export products. We ship our cotton to Switzerland at 14 cents a pound and buy it back at $40 a

pound—all labor and brains; we ship this copper abroad and buy it back in surgical instruments and dynamos, and we ship 60,000,000 of fur skins, and call them manufactured products. We ship 60,000,000 or so of lumber and call it manufactured product.

The CHAIRMAN. Unless statistics are all wrong, we have shipped various articles of finished products in competition with other nations.

Mr. MILES. We are shipping 60 per cent of the stuff I have been describing—very crude. The other 40 per cent comes from that utterly crude stuff up to highly finished products. Shoes, for instance; but the shoe men are losing out all over the European markets because we are wonderful inventors. But we have that shoe market abroad, and now they are getting it back for themselves. We still ship Singer sewing machines, agricultural implements, typewriters, and two or three other highly finished products, but as a rule we ship the crudest stuff.

That is the economic side, and I have told something of the human side. We have labor troubles—discontent. Gentlemen, a boy dropped out of school at adolescence can not make a level-minded citizen. The chances are against his being a strong and level-minded citizen. Our labor is naturally the admiration of the world in all its native qualities, but they are entitled to something else. They are entitled at the expense of the public, as a birthright, to the education that makes the laboring man efficient.

The CHAIRMAN. Let me ask you right there: Do you not think the American laboring man is better off to-day in mind, soul, and body than the average laboring man in England, for instance? I think so. I may be mistaken.

Mr. MILES. Mr. Chairman, we are Anglo-Saxon. England is Anglo-Saxon, and England is in very much our sort of trouble, and in serious trouble. Utterly confused are they in England, and they do not know why, and the English labor union sent a delegation over to Germany to find out why labor is so contented and prosperous there, and they found it was their industrial education. So the plea I make would apply even more to England, at least equally, to the plea I make for the American workingman, but when you come to Germany——

The CHAIRMAN. Before you get on that let me suggest the practical way, inasmuch as you picture the condition of the manufacturing arts here in comparison with those of other countries, would be to confine the provisions of this bill to the manufacturing business alone. Let me remind you that the South with all its disadvantages is improving under this condition all the time, and our farmers are on easy street.

Mr. MILES. Mr. Chairman, I say God bless the South, and I will say the South can bless God for its past, too. It was the poverty of Germany that made it the greatest nation on earth, and it was the poverty of the South that left her manhood and strength intact and is making the South greater than ever.

The CHAIRMAN. There you suggest another thought, that all this is the result of personal initiative.

Mr. MILES. If you destroy personal initiative the country would not be worth saving.

The CHAIRMAN. Exactly; but how far this bill is going to do it is another question. We are anxious and glad to hear all you have to say, but I put this suggestion to you, the practical application of this bill here, that we are now going beyond our resources, and a deficiency of money in the hands of the Government is staring us in the face.

Mr. MILES. I started with no particular information on these matters. I had to go everywhere to get information and have been helped by Mr. Cooley, of Chicago, who first was an apprentice mechanic, then a journeyman, then an employer, then for 30 years a school-teacher, and for the past year or so has been in Germany studying the propositions that must be brought home to this country if this country industrially is to be saved, and it is going to be. It is only a question of how long you gentlemen and others will let us wait. It is just as sure to come as to-morrow's sun, and when it does we will be the greatest industrial nation on earth.

The CHAIRMAN. Do you think the industrial workers of Germany and France are in a better condition than the industrial workers of this country?

Mr. MILES. Our natural resources are so limitless that money has been picked off the bushes in this country. But the content and the increase in wages, the understanding intelligence, of the German mechanic is far above that of the average American. Now, I would not say anything against the native ability and resourcefulness of the American workingman. I have lived with him for 30 years, and I have more patience with him than with any other class. I sympathize with the man who carries the dinner pail. I know him thoroughly. But give him his rights and give him a chance. What is education? We never understood. It is not book-learning. We thought the only thing that spelled education or was worth while was book-learning, and in a way it is the most useless of things.

The CHAIRMAN. Will you let me define my definition of what education is? Education is the mechanical art of teaching men to think correctly, to act intelligently, and to feel sympathetically.

Mr. MILES. I have this definition: The preparation of the citizen to take his part, to do his part, and take his place in the life of his community and the nation. It comes down to the matter of efficiency. It is the development of the individual to take his place and do his part in the life of his community and his countrymen, to support himself and help others. And there is where we have absolutely denied education to 50 per cent of our people. If the boy is not educated he can not use his mind or muscles intelligently or efficiently for his own development and maintenance, and we American people have not given one particle of that to 50 per cent of our childhood. It would have been murder to have done it knowingly, but it was forgetfulness and lack of understanding.

As to the expense, we are now spending $500,000,000 a year in these book-learning schools, which I appreciate, because I have been through them—I mean the common schools—and another hundred millions for colleges. We are spending five hundred millions on our book schools. There is a good deal of money spent. We are doing that for half the children. Now, that has to be redistributed. It is a great task, and I believe a hundred millions will be reapplied to the

benefit of the other class of children. Germany is giving at a cost of $7 to $12 per child per year a school that to my mind is as good as we are giving to one-half our children at $30 to $50 a year. The efficiency of the citizen is not always the bookman or the college man or schoolman.

A gentleman took an account of the citizenship, the leading citizenship, of one of our greatest cities the other day, and of all the men who are responsible for the present day activities and prosperity of that city he found that every one of them quit school at from 12 to 14 years of age without an education. They had that native force that made them greater than the school men. May I talk of book learning? I would like to develop that. Germany takes 50 per cent of our manhood that is thrown out of our school windows at 14 years of age and makes the best citizenship it has of what we reject. We are like a blast range that throws its slack away, and I do not know whether in this country we are throwing the cement away or the steel away. A census was taken of 150 employments in the German Empire. Of the high grade institutions of industry, containing engineers and scientific men, 64 per cent quit school at 14 years of age and in a sense had no book learning. But here is the whole secret: Germany takes that rejected material and says to the little boy of 14, you are at the time that you ought to quit school. There is a reason why half of our boys quit; their little stomachs will not take the kind of food offered, and some quit because they say they are poor. The best statistics show that 76 per cent of those that quit could stay in school, but they simply will not. The resources of the family are inadequate to keep the child in school. Germany takes 50 per cent of our manhood and says, as we say in Wisconsin: "Little man, quit school and go to work, but still you will stay educationally in the hands of the State just the same;" and so in Wisconsin the employers of the State not only pay the wages of every little boy that goes to work at 14, but they pay for his education. At the employers' expense the little boy goes back to school in working hours. He does not wear his little body out after dark. He goes back in working hours and is taught, and, gentlemen, I believe that the boy that goes into a shop, whom we call a hopeless boy, those boys that quit school at 14, 85 per cent of them go into the blind-alley jobs.

Germany takes those boys, as we do in Wisconsin, and with one day of schooling she interrupts the five days of labor. The best school on earth probably is the school that comes from the school of hard knocks and practical experience, but it is a little unfortunate for that school that has no guiding hand. Germany takes every one of them and they go to work. They know what it is to earn a dollar, to be commended for earning that dollar, and go back in the school one of the days of the week at their employers' expense and be educated.

Mr. TALCOTT. What is that arrangement about going to work part of the time?

Mr. MILES. It is called the continuation school in Europe. But the boy goes out and earns his wages, goes to work, and then goes to the continuation school one day where one dollar of the expenditure, to my mind, brings back a thousand.

The CHAIRMAN. Is there an arrangement between the owner and operator of the factory where the boy is employed and the school authorities? What is the arrangement?

Mr. MILES. In Wisconsin we passed a law that the employer not only must but gladly does comply with. He gives the boy to the local school 5 hours in the week. In Germany it is from 8 to 12 and 15 hours a week, a full day in the week, and the wages continue.

Mr. TALCOTT. Does he pay it cheerfully?

Mr. MILES. The New York Central Railroad has been doing this for some years, and the superintendent, I think not of the railroad, but of the whole educational department, says the cheapest and best wages that road pays to these little boys is the wages paid while the boy is in school. The New York Central employees go to public schools or to schools maintained by the company. They maintain the schools, and they bring the little boy into that school at 7 in the morning and keep him there from 7 to 9 two mornings in the week, and they say a boy that has been a little instructed in that school so he has the mechanical instinct will take a new machine and in two or three weeks will get out of that machine seven-eighths as much as a skilled mechanic, while a boy who has not this help will take three or four months to get out half as much as a skilled mechanic. These little boys simply leap for it, if you give them that opportunity.

Mr. TALCOTT. How long do they keep the boys in these schools?

Mr. MILES. In Wisconsin from the ages of 14 to 16.

Mr. TALCOTT. In the New York Central?

Mr. MILES. Until they have pretty well mastered the fundamentals.

Mr. HOLDER. Do you not think what Wisconsin is doing the other States will do, and some of them are doing?

Mr. MILES. Wisconsin is the only State that has done it; it is so right that the others will emulate it in some measure. If the Congress of the United States will encourage this movement by the passage of this bill, it will go a long way in the right direction.

Mr. MCLAUGHLIN. In Wisconsin, as you perhaps know, these manufacturers have night schools teaching these arts, and we have one where boys work in the shops and go to this night school at night—mechanical institute.

Mr. MILES. It is discouraging, however, how few of the boys attend. That is the trouble with our trade schools. I have told you that half the children leave school at 14 years of age. In St. Louis, 72 per cent leave in the sixth grade. Three-fourths of the childhood of that city is thrown upon the street. This will come some time without the aid of Congress, but if you would just interpret this to the people and give a start and a help there is no question about it that you will advance the cause very many years. You gave $3,000,000 to agricultural mechanic arts; none of that money goes to the mechanics I am talking about. You have done a great deal for agriculture; you have not done a fourth of 1 cent for the farm boys and farm girls of the land. I am sure the gentleman from Nebraska would favor this, as I believe he said he went through a trade school.

Mr. MAGUIRE. University of Nebraska; the agricultural and mechanical department.

Mr. MILES. That is the reason you come to Congress so quickly. A son of the chairman went through a trade school. That is why he became an instructor here so quickly.

Mr. MAGUIRE. I am also a graduate of the agricultural college.

Mr. MILES. I suppose that is the reason you have come to the city. In Milwaukee, a city of 400,000 people, there are only 95 boys in the trade school, but they are in as good a trade school as there is on earth.

Mr. MCLAUGHLIN. How do you account for that?

Mr. MILES. They have not room, and it is a great expense. I understand that it costs $250 per year per boy in that Milwaukee school.

Mr. MAGUIRE. The superintendent of that school came from Nebraska. He must be all right.

Mr. MILES. He became superintendent of the school because he went to your trade school also. How many great men have attended these trade schools, but at $10 a year and not $250 a year, will make just as good men from the countless thousands of boys who are now turned loose, and of these boys 80 per cent go into blind-alley jobs. I have not talked about the girls, but of 5,000 girls who go into the red-light district of Chicago 90 per cent come from this class that, as I put it, are turned out of the schools at 14 years of age. The time of adolescence is the time when character will be made or unmade. It is the time when you are beginning to be an adult and have all the aspirations and inclinations of the grown person, and when you most need direction.

The CHAIRMAN. Now, you are on another question. That belongs to the domain of theology and morals more than art.

Mr. MILES. Just good citizenship, and we do not want mechanics who are not good citizens; and incidentally it is well to save the moral character of the people and give them good judgment in matters of citizenship so they can vote better and, if they are laboring men, get their rights better and observe better their obligations to their employers. That is incidental.

Mr. MCLAUGHLIN. Do you speak to outside gatherings and organizations?

Mr. MILES. No, sir; practically not at all. I am only a business man.

Mr. HAWLEY. As you come in contact with the people in your work, do you not find very serious criticism of Congress for the very large appropriations in the aggregate that they are making?

Mr. MILES. Very severe criticism as to what you give to rivers and harbors, and great bodies like the pensioners that cast many votes. You couldn't give a million dollars of money to any project that would win such tremendous commendation from every intelligent citizen as this would, and if you want to popularize the expenditures of Congress cut this nine millions in the middle, divide it up in equal proportions, and I wouldn't want to say how much you would be commended. The people would immediately commend it. When you start out to save and energize and make more efficient the hundred million people who will control this country in the future you are doing a great work.

May I say one word more? We have done this little thing: We have built this little school here in our city, and it does not cost much.

I can not tell you the stories of the boys who have been saved. In Cincinnati there is a school of 200 children who were to one to three years back in their courses. They could not learn from the book, and so they took them over to the Hillis Home; and they have learned infinite diligence and concentration and application, and some of these boys after a little bit of industrial education go back to the public school and become the brightest children there. A little money will help half our childhood how to find themselves.

The CHAIRMAN. Let me suggest that it would be a good idea for you to go to the various States and tell them what your State is doing on this line, and there would be no necessity for the Government doing this.

Mr. MILES. When we come before a body as wise as this and you say this country is spending as much as it is and can not give a paltry five or eight million dollars to save the manhood and energize the industries, I am surprised.

The CHAIRMAN. Your State is doing this, and if you go and succeed in getting other States to do a little you will deserve a monument as high as the Washington shaft.

Mr. MILES. I am sure that you can be induced to help us. It is very important.

Mr. LEVER. Mr. Miles, let me ask you, what is the total appropriation of this bill when it accumulates?

Mr. MILES. I understand, Mr. Lever, it is $9,000,000.

Mr. LEVER. The progress made in Germany was made by Germany as a nation.

Mr. MILES. The Federal Government supervises this, but follows Germany. To see that the money is rightly spent, three or four men will be appointed to look after that. Germany does that. And then every locality for $1.000.000 that the Government gives the States will have to give four millions more, and for one million that Congress will give at least fifty million will be spent by the localities.

Mr. LEVER. How much money is appropriated from the imperial treasury of Germany for this work?

Mr. MILES. It runs into the hundreds of millions.

Mr. LEVER. That is, in addition to the amount expended by the localities?

Mr. MILES. Yes, sir.

Mr. LEVER. Are you well advised in saying several hundreds of millions?

Mr. MILES. I know it runs into millions of dollars.

Mr. LEVER. Of course you understand the various States or Provinces of Germany have different methods of treating this question. Prussia has more imperial support than any other of the Provinces, but it is a combination of national and local contributions.

Mr. MILES. Everybody contributes and everybody individually contributes very largely, each in proportion to the advantages. The Federal Government and the localities all give a great deal. But the tremendous expenditure over there comes, as it will here if you pass this bill, from the States and communities, and no two communities can have the same school. There is where personal initiative can never be better developed than right here. In Oshkosh there will have to be one kind of a school, and out in Arizona, where there are no industries, there will have to be another kind. Every community

must have a school that is right for that community, and it is not difficult to get it. It has been done in many other nations, so there is an infinite opportunity for local expenditure and initiative.

Mr. HAWLEY. How long has this system been in vogue in Germany?

Mr. MILES. I think about 130 years. Forty years ago it was in the hands of the old school-teacher class, but it was not satisfactory. Twenty-five years ago they put it in the hands of the workingmen and employers, that it might be infinitely practical. In Wisconsin we have two employers, two employees, and the city superintendent in every little community of 5,000 people and over, so it is intensely practical. In Arizona we have that. We went out and got committees of employers. It is a wonderful proposition for initiative.

Mr. C. A. PROSSER. I would like to say this: In 1876, at the Philadelphia Exposition, there were certain educators and business men in this country who became very much alarmed over the plans Germany had then put on foot for industrial education. There was an attempt made in several States at that time to inaugurate a similar policy. We are in this year of our Lord 1912 and only three States of these United States have adopted a comprehensive policy in dealing with this question, and the judgment of some of us is that if Federal aid was offered in 1876 and as the opportunity presents itself to-day we should be abreast of Germany in this matter.

The CHAIRMAN. What States are those?

Mr. PROSSER. Wisconsin, New York, and Massachusetts.

Mr. HAWLEY. Was there an increase in the work in Germany after the national legislature contributed to that work?

Mr. PROSSER. Oh, yes. The real significance of this movement began then.

Mr. HAWLEY. It began when the National Government took an interest?

Mr. PROSSER. Yes, sir. You understand, at the close of the Napoleonic wars Germany set itself to the task of saving itself, and it was only when the Federal Government found it was necessary to put in these large sums of money and give Federal supervision that the movement acquired the strength and efficiency it has to-day.

Mr. MILES. I just want to refer to a point or two. Germany was so poor 40 years ago that she hardly knew how to exist, and she is now so rich from the competency of her industrial workers that some people fear she will be undone by her wealth. I just want to say one word more about the trade education that we have. In all our trade schools we teach only bricklaying, metals, carpentry, and I have forgotten one other—four trades. Germany teaches all the trades—47 trades taught in the single city of Munich alone, so that every citizen of Germany is going to be a skilled workman. Germany has got to the point when all her labor is skilled labor. Another thing: The reason the country population is running to the city is because machinery is changing everything. You have to get the city population right. One more thing: You think of educating the farm boy in agriculture. I am with you heart and soul, and everybody is, but he does not need it as much as the city boy, because the farm is a liberal education. You educate mind, body, muscle, character, and everything naturally on the farm, but you do just the reverse in the city. It is the city that must be saved. Gentlemen, I thank you for your patience.

A final suggestion, please, as to how to find the money, in view of your present belief that the Treasury is short of funds.

You have already recommended in the Lever bill $3,000,000 per annum for agricultural extension work only. The purpose is only that we may raise more corn, more hogs, more cotton, etc. Cut this in two. Give $1,500,000 immediately for agricultural education and extension work, and the other $1,500,000 for industrial education. Then require that every State receiving Federal aid shall appropriate an equal amount from its own funds as well as meet the Federal standards of instruction.

This will result in even greater help for agriculture than the Lever bill provides and marvelously help commerce and manufactures, and will use only the moneys you have already voted. Indeed, you may well go further and require that each community receiving assistance shall duplicate the total of Federal and State aid. In that way the Lever bill moneys will bring fourfold advantages in cash expended, and a thousandfold greater profit in national efficiency, character, and happiness, as well as in corn, cotton, and cattle.

Names of newspapers and periodicals that have gone on record in favor of the general spirit and purpose of the provisions of the Page-Wilson bill:

Southern Machinery, Atlanta, Ga.
Daily Journal of Commerce, San Francisco, Cal.
The Evening Star, Washington, D. C.
The Washington Post, Washington, D. C.
Farm Home, Springfield, Ill.
American Bee Journal, Chicago, Ill.
Farm Review, Chicago, Ill.
National Food Magazine, Chicago, Ill.
School Science and Methematics, Chicago, Ill.
The Banker, Chicago, Ill.
The Argus, Rock Island, Ill.
Indiana Farmer, Indianapolis, Ind.
Pierce's Farm Weeklies, Des Moines, Iowa.
The Iowa Homestead.
Wisconsin Farmer.
Farmer and Stockman.
Kimball's Daily Farmer, Waterloo, Iowa.
Creamery Journal, Waterloo, Iowa.
Successful Farming, Des Moines, Iowa.
Western School Journal, Topeka, Kans.
Missouri Valley Farmer, Topeka, Kans.
The American Machinist.
The Southern School Journal, Lexington, Ky.
The Courier-Journal, Louisville, Ky.
The Manufacturer's Record, Baltimore, Md.
The Weekly Bulletin, Boston, Mass.
The Orange Judd Weeklies, Springfield, Mass.
The Commercial Bulletin, Boston, Mass.
The Journal of Education, Boston, Mass.
The Printing Art, Cambridge, Mass.
Horticulture, Boston, Mass.
Michigan Tradesmen, Grand Rapids, Mich.
Daily Record, St. Paul, Minn.
St. Paul Pioneer Press, St. Paul, Minn.
St. Paul Dispatch, St. Paul, Minn.
American Women's League, St. Louis, Mo.
The Fruit Grower, St. Joseph, Mo.
Rocky Mountain Husbandsmen, Greatfalls, Mont.
Nebraska Farm Journal.
The Times, Rochester, N. Y.
The Knickerbocker Press, Albany, N. Y.
The American Federationist.

The Machinists' Monthly Journal.
The Carpenters' Journal.
The Iron Molders' Journal.

Names of national organizations that have gone on record in favor of the general spirit and purpose of the provisions of the Page-Wilson bill:

National Democratic Party at Denver convention of 1908.
American Federation of Labor.
National Metal Trades Association.
National Manufacturers' Association.
National Society for the Promotion of Industrial Education.
National Grange.
International Dry Farming Congress.
American Education and Cooperative Farmers' Union.
National Education Association.
International Congress of Farm Women.
Southern Educational Association.
National Committee on Agricultural Education, representing the departments of public instruction and the normal schools of the several States.
Department of Superintendence, National Educational Association.
National League of Industrial Education.
Farmers' National Congress.
American Association for Labor Legislation.
American Foundrymen's Association.
United Textile Workers of America.
American Association for Study and Prevention of Infant Mortality.
National Domestic Science Association.
Association of American Agricultural Colleges and Experiment Stations.
Southern Commercial Congress.
American Education and Cooperative Farmers Union.
American Society of Equity, jointly representing several million farmers.
National Committee on Agricultural Education.
Agricultural and Rural Education Department of the National Educational Association.
National Committee on Agricultural Education, National Educational Association.
General Federation of Women's Clubs.
The National Child Labor Association.

Names of institutions in States favoring through their officials the general spirit and purpose of the provisions of the Page-Wilson bill:

State Normal School, Oshkosh, Wis.
Washington State Normal School.
Riverfalls State Normal School, Wis.
Alabama State Normal School, Florence, Ala.
First District Agricultural School, Jackson, Ala.
University of Arizona, Tucson, Ariz.
Arkansas State Normal School, Canway, Ark.
State Agricultural School, Jonesboro, Ark.
Connecticut Agricultural College, Storrs, Conn.
McKinley Manual Training School, Washington, D. C.
Iowa State Teachers College, Cedarfalls, Iowa.
Iowa State College of Agricultural and Mechanical Arts.
Tobin College, Iowa.
Eastern Kentucky State Normal School, Richmond, Ky.
Agricultural High School, Sparks, Md.
Massachusetts Agricultural College, Amherst, Mass.
Central High School, Grand Rapids, Mich.
University of Minnesota, St. Paul, Minn.
University Farm, St. Paul, Minn.
Mississippi Agricultural and Mechanical College.
School of Agriculture, Starksville, Miss.
Missouri State Normal School, Springfield, Mo.
Montana Agricultural College.
Montana Agricultural Experiment Station, Bozeman, Mont.
New Hampshire Agricultural Experiment Station, New Hampshire College, Durham, N. H.
Training School, Vineland, N. J.
New Mexico Normal University.

State Normal and Training School, Cortland, N. Y.
Teachers College, New York City.
Syracuse University.
College of Agricultural and Mechanic Arts, Raleigh, N. C.
State Normal School, Valley City, N. Dak.
Normal School, Madison, N. Dak.
North Dakota Agricultural College.
State Normal College of Ohio.
Agricultural and Mechanical College, Stillwater, Okla.
Northwestern State Normal School, Alva, Okla.
Oklahoma Agricultural Experiment Station, Stillwater, Okla.
Oregon State Agricultural College.
Chester Agricultural High School, Chester, Pa.
State Normal School, Mansfield, Pa.
Pennsylvania State College of Agriculture.
The Rhode Island Normal School.
Winthrop Normal and Industrial School, Rock Island, S. C.
State Normal School, Salt Lake City, Utah.
St. Johnsbury Academy, St. Johnsbury, Vt.
Norwich University, Northfield, Vt.
Vermont State School of Agriculture.
Middlebury High School, Middlebury, Vt.
Montpelier High School, Montpelier, Vt.
The Manassas Agricultural High School, Manassas, Va.
University of Virginia.
State College of Washington.
West Virginia University.
Shepherd College, State Normal School, Shepherdstown, W. Va.
State Normal School, Milwaukee, Wis.
Milwaukee County School of Agricultural and Domestic Economy.
Wisconsin State Normal School.
La Crosse School of Agricultural and Domestic Economy.
University of Wisconsin, Madison, Wis.
New York State Association of Philanthrophy.
University of Maine.

Names of local organizations that have gone on record in favor of the general spirit and purpose of the provisions of the Page-Wilson bill:

Children Aid Society, New York City.
Charity Organization Society, New York City.
Lanham Grange, No. 252, Patrons of Husbandry, Lanham, Md.
Elizabeth Grange, No. 195, Patrons of Husbandry, Oakland, Md.
Eureka Grange, No. 177, Patrons of Husbandry, Chillum, Md.
Nanjemoy Grange, No. 306, Patrons of Husbandry, Nanjemoy, Md.
Sandyville Grange, No. 256, Patrons of Husbandry, Sandyville, Md.
Taneytown Grange, No. 184, Patrons of Husbandry, Taneytown, Md.
Baltimore Chamber of Commerce.
Crop Improvement Committee, Chicago Board of Trade.
Council of Grand Exchanges, Chicago, Ill.
The National Council for Industrial Defenses.
National Association of Creditmen.
Marumico Grange, No. 282, Patrons of Husbandry, Marumico, Md.
Mardela Grange, No. 300, Patrons of Husbandry, Mardela Springs, Md.
Cordova Grange, No. 301, Patrons of Husbandry, Cordova, Md.
Chamber of Commerce, Pinebluff, Ark.
Young Men's Christian Association, Washington, D. C.
Federated Jewish Charities, Boston, Mass.
Boston Chamber of Commerce.
High School Teachers Association, New York City.
The Business Men's Association of Newburgh, N. Y.

A partial list of Senators, governors, and other men prominent in public life who have gone on record in favor of the general spirit and purpose of the provisions of the Page-Wilson bill:

President William H. Taft.
Ex-President Theodore Roosevelt.
Hon. Judson Harmon, governor of Ohio.
Hon. Albert Cummins, United States Senator, Iowa.
Hon. S. Guggenheim, United States Senator, Colorado.

Hon. C. S. Deneen, governor of Illinois.
Hon. Thomas R. Marshall, governor of Indiana.
Mr. Samuel Gompers, president American Federation of Labor.
Mr. John Mitchell, vice president American Federation of Labor.
Mr. John Golden, president United Textile Workers of America.
Mr. Frank Duffy, president International Brotherhood of Carpenters.
Mr. Arthur E. Holder, chairman legislative committee, Amelcan Federation of Labor.
Mr. Charles H. Winslow, secretary committee on education, American Federation of Labor.
Hon. Chase S. Osborn, governor of Michigan.
Hon. Moses E. Clapp, United States Senator, Minnesota.
Hon. Charles R. Davis, Member of Congress, Minnesota.
Hon. William B. Wilson, Member of Congress, Pennsylvania.
Hon. Edward W. Saunders, Member of Congress, Virginia.
Mr. H. E. Miles, chairman committee on Education, National Manufacturers' Association.
Mr. John W. Kirby, president National Manufacturers' Association.
Mr. Fred A. Gier, chairman committee on industrial education, National Metal Trades Association.
Mr. Robert Wuest, commissioner National Metal Trades Association.
Hon. James E. Martine, United States Senator, New Jersey.
Hon. William H. Andrews, Territorial Delegate for New Mexico.
Hon. Charles Nagel, Secretary of Commerce and Labor.
Hon. J. J. Whitacre, Member of Congress, Ohio.
Hon. L. B. Hanna, Member of Congress, North Dakota.
Hon. Lee Cruce, governor of Oklahoma.
Hon. Oswald West, governor of Oregon.
Hon. J. K. Tener, governor of Pennsylvania.
Dr. P. P. Claxton, Commissioner of Education.
Hon. John A. Mead, governor of Vermont.
Gov. McGovern, Wisconsin.
Hon. William C. Redfield, Member of Congress, New York.
Hon. Carroll D. Page, United States Senator, Vermont.

Names of State and interstate organizations that have gone on record in favor of the general spirit and purpose of the provisions of the Page-Wilson bill:
St. Louis Branch, National Metal Trades Association.
Pennsylvania Branch, National Metal Trades Association.
Ohio Branch, National Metal Trades Association.
Massachusetts Branch, National Metal Trades Association.
Colorado Teachers' Association.
Indiana Branch, National Metal Trades Association.
Minnesota State Dairymen's Association.
Washington State Grange.
Vermont State Teachers' Association.
New England Rural Uplift Association.
Illinois Bankers' Association.
Elko Educational Institute, Elko, Nev.
Tonopah Educational Institute, Tonopah, Nev.
Las Vegas Educational Institute, Las Vegas, Nev.
State Board of Agriculture, Trenton, N. J.
Pennsylvania Rural Progress Association.
Vermont State Grange.
Associated Boards of Trade, Maryland.

Names of State superintendents of public instruction and other State education officials favoring the general spirit and purpose of the provisions of the Page-Wilson bill:
Alabama: J. A. Wilkinson, commissioner of agriculture and industries.
Arkansas: George B. Cook, superintendent of public instruction.
California: Edward Hyatt, State superintendent of public instruction.
Connecticut: Howell Cheney, member State board of education; State board of education.
Delaware: H. Hayword, Delaware State Board of Education.
District of Columbia: Dr. William Davidson, superintendent of public schools.
Florida: William Halloway, State superintendent of public instruction.
Georgia: M. L. Brittain, State superintendent of education.
Idaho: G. M. Shepherd, State superintendent of public instruction.

Indiana: Charles A. Greathouse, State superintendent of public instruction A. Lapp, secretary commission on industrial education.
Iowa: Albert M. Deyoe, State superintendent of public instruction.
Kansas: E. T. Fairchild, superintendent of public instruction.
Louisiana: T. H. Harris, department of education.
Maine: Payson Smith, superintendent of public schools.
Massachusetts: David Sneadden, commissioner of education.
Minnesota: C. G. Schulz, superintendent department of public instruction.
Missouri: William P. Evans, State superintendent of schools.
Nebraska: J. W. Crabtree, State superintendent, department of public instruction.
Nevada: John Edwards Bray, superintendent of public instruction.
New Jersey: C. M. Kendall, commissioner of education.
North Carolina: J. Y. Joyner, superintendent of public instruction.
Oklahoma; R. H. Wilson, superintendent, department of education.
Pennsylvania: George M. Philips, superintendent of State education.
South Carolina: J. E. Swearingen, State superintendent of education; E. J. Watson, commissioner of the department of agriculture, commerce, and industries.
South Dakota: C. G. Lawrence, State superintendent of public instruction.
Texas: F. M. Bralley, State superintendent of education.
Vermont: Mason S. Stone, State superintendent of education.
Virginia: J. D. Eggleston, jr., superintendent of public instruction.
Washington: Henry B. Dewey, State superintendent of public instruction.
West Virginia: M. P. Shawley, State superintendent of public instruction.
Wisconsin: H. E. Miles, chairman, State commissioner on industrial education.

At 12 o'clock m. the committee adjourned until Friday, April 26, at 10.30 a. m.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, D. C., April 26, 1912.

The committee was called to order at 10.30 a. m., Hon. John Lamb (chairman) presiding.

Mr. WILLIAM B. WILSON. Mr. Chairman and gentlemen of the committee, I wish to present to you the Rev. J. Milton Waldron.

STATEMENT OF REV. J. MILTON WALDRON.

Mr. WALDRON. Mr. Chairman and gentlemen, the committee now before you is composed of the Hon. J. C. Napier, of Tennessee, Register of the United States Treasury, and Revs. Drs. John Hurst, A. C. Garner, and J. Milton Waldron.

This committee represents the National Association for the Advancement of Colored People, an organization of over 500 white and colored men and women, with headquarters in New York City, and branches in many of the principal cities of our country; the purpose of this association is—

to uplift the colored men and women of this country by securing to them the full enjoyment of their rights as citizens, justice in all courts, and equality of opportunity everywhere. It favors, and aims to aid, every kind of education among them which teaches special privilege or prerogative, class, or caste. It recognizes the national character of the Negro problem and no sectionalism. It believes in the upholding of the Constitution of the United States and its amendments in the spirit of Abraham Lincoln. It upholds the doctrine of "All men up and no man down." It abhors Negro crime, but still more the conditions which breed crime, and most of all the crimes committed by mobs in the mockery of the law or by individuals in the name of the law.

It believes that the scientific truths of the Negro problem must be available before the country can see its way wholly clear to right existing wrongs. It

has no other belief than that the best way to uplift the colored man is the best way to aid the white man to peace and social content; it has no other desire than exact justice and no other motive than humanity.

Mr. Chairman, we wish at the very beginning of our remarks to assure you and your committee of our profound appreciation of the spirit of fairness and justice which prompted you to prolong this hearing beyond the limits set for it in order that our committee might be heard, and we shall be considerate of your patience by presenting what we have to say in the fewest possible words and by refraining from lecturing or criticizing the committee.

The National Association for the Advancement of Colored People is heartily in favor of the general purposes of the Wilson-Page bill (H. R. 23581, 62d Cong., 2d sess.), but it is strongly opposed to certain omissions in the bill and certain features incorporated therein which, taken together, inflict a flagrant injustice upon the 8,000,000 colored citizens living in the 16 States where separate schools are maintained by law for the two races.

The Wilson-Page bill proposes to appropriate out of the National Treasury from $12,000,000 to $18,000,000 annually to be used in promoting vocational education in the several States along seven distinct and definite lines, viz: "Secondary schools," "Industrial or home economics schools," "District agricultural high schools," "Branch stations," "Extension work department," "College teachers' training department," and "Normal tecahers' training department." The bill is framed so as to allow the white people in the District of Columbia and in each one of the 48 States, and the colored people in each one of the 32 States where the two races are educated in the same schools, to participate in all of the seven departments of instruction provided for by the Wilson-Page Act. But when the bill comes to deal with the 16 States where separate schools for the two races are maintained, it restricts the 8,000,000 colored people in those States to participate in one, and only one, of the seven departments of instruction provided for in the Wilson-Page Act, viz: "Instruction in agriculture and home economics in district agricultural high schools" (see p. 13, lines 15–25). And what is more important, that part of the bill which is supposed to provide for colored people living in the 16 States referred to above, "Instruction in agriculture and home economics in district agricultural high schools," is so framed as to practically prohibit what it professes to confer, for there is no such thing as a "District agricultural high school" in the meaning of the term as used in the Wilson-Page bill for colored people in any one of the 16 States where separate schools for the two races are maintained. And as to whether there shall ever be established "District agricultural high schools for colored people" in those 16 States is left "optional" with these States, i. e., any one or all of these 16 States may receive funds for the carrying on all of the seven departments of instruction mentioned in the act and spend every cent of it in educating its white population without making any provision whatever for the education of its colored population along the lines laid down in the Wilson-Page bill.

We do not believe the Wilson-Page Act can pass either the House or the Senate with this flagrant injustice written upon its very face. But should the bill by some hook or crook get through Congress and

be signed by the President we doubt its ability to stand the test of the courts.

The only reference or provision for the colored people living in the 16 States where there are separate schools is found on page 13, lines 15 to 25. You are familiar with the bill; I need not read it; simply to say that that bill with that provision, if it remains in, ought to be amended so as to give benefit to the colored people living in those 16 States under all the several lines of education.

I need not say to most of you gentlemen that the colored people, while they have had but little opportunity since the close of the war for training in skilled occupations, were skilled mechanics before the war, and the houses they built, the wagons they constructed, compared favorably with those constructed and built in any other part of this country. But from the close of the war until the present time the colored man, especially in those 16 States, has been gradually pushed out of the skilled occupations by immigrants who have come into this country in large numbers and by some of the native whites who have had to take to that kind of work to make a living. I do not claim that the author or authors of the bill—for, as I understand, there were at least three authors—had an intention to aid the bad features of the labor organizations when they drew this bill, but while I believe that is the case, it is nevertheless true that the provisions of this bill play into the hands of the labor organizations which do not admit, to any large extent, skilled colored workmen into their organizations, and which do not care to take any colored boys as apprentices, and which limit the taking in of their apprentices, anyway.

If the colored people of these 16 States are not given the opportunity of being trained as skilled mechanics, skilled agriculturists and the like, of course the plea will be made they can not do skilled labor and not being safe, of course they will be kept out of the labor organizations, and that will put the work in those States into the hands of the labor organizations and the immigrants who are flocking to those States. I believe the colored citizens ought to be given the opportunity to be trained—we know they are not anarchists and they do not very often even engage in strikes—and I believe when they are trained the capitalists and manufacturers will appreciate them and will be willing to give them increased opportunity, and I am hoping the labor organizations will put down the bars, as I feel they ought to do, and take in all honest laborers and all honest workmen. I realize there are difficulties, but I do not believe the difficulties are insurmountable. I believe we can remedy them if we have skilled workmen and have these people improve in character and become desirable assets for the manufacturers.

The CHAIRMAN. You very well know that these 16 States, to which you refer, provide education for this race right along with the white race, and in the State of Virginia they give them the same opportunity, and they have schools, and they have every opportunity in the world. Recognizing that the negro is naturally an agriculturist, I notice that the bill provides in one of its sections for negro training in these agricultural schools. It is true, as you say, there are no schools of the higher grade for the negroes in many of these States, but the reason for that is the negro's condition is such that there would be very few who would be able to attend the schools of higher grades.

Mr. WALDRON. I am frank to say that I have lived almost all my life in Virginia, and I am a colored man and I know the restrictions a colored man is subject to, and I know that Virginia has done better than many other States, but we are far from getting equal advantages for education in Virginia along with the whites, and unless some provision is made in this bill we will remain without these opportunities for an almost unlimited time before we can get the privileges we desire. I believe the foundation ought to be laid now for giving the colored man proper instruction in farming and all that these friends have hoped for in this bill. I believe the colored man needs the same kind of education that all men need, which he will never get unless we begin now with him and make the opportunity for him, and he is capable of receiving a far better education than he is now getting.

The CHAIRMAN. I do not think he is in Virginia, and you very well know that in Virginia we have a kindly feeling for him.

Mr. WALDRON. I know that, and that is one of the reasons why I am here. I believe you mean to see that the colored man gets justice, and all we are asking for is justice. We are taxpayers and consumers and represent a large citizenship of this country, and whenever you called on us we have always come up to the extent of our ability, and hope we will always continue to do so. For that reason I do not see why the white people in the 16 States I have referred to should be given the benefit of that portion of $12,000,000 and the colored man only be given a portion of $3,000,000, and that left optional with the State. They are not obliged to give; it is left optional; and I might say with regard to that matter that the money that comes to the colored people under the Morrill Act, while the Government insists that there will be a proper appropriation given to those schools, there is not a single school which, under the Morrill Act, in the whole system for colored people, that gets all that it is entitled to. These schools get every year from $3,000 to $8,000 less than they are entitled to, and that, gentlemen, where the law insists that they shall have a certain proportion.

Mr. MCLAUGHLIN. Did you call that to the attention of the Secretary of Agriculture, who distributes this money?

Mr. WALDRON. Mr. Napier has been working on this matter for a long time, but he seems to be unable to get anything done. We have been trying now for a long time to get that matter righted, but there seems to be no way for the gentlemen to whom we go to set this right.

The CHAIRMAN. Probably the schools are not organized in such a way as to come within the provisions of the Morrill Act.

Mr. WALDRON. Then they ought not to receive anything. If they do not comply with the law, they ought not to have anything. They must comply with the law.

The CHAIRMAN. Most likely that is the reason—that they have not complied with the law. I do not know, as I have not looked particularly into it. I know that the Secretary is not going to make a distinction between people; I am satisfied of that.

Mr. WALDRON. They are not going to make distinctions; but there is a way of getting around things. The point I was going to make is that where the law commands a thing to be done it is not done. Certainly they have left it optional. From past experience we do

not see that there is much prospect of getting any of the money from the States out of this bill. We believe in justice, and we are simply asking for that, and justice demands that these people be given their pro rata share along with the other people in the States and that they be made productive workmen, because they are needed in the South. Eight millions of us live down there, and we are going to continue, most of us, to live in the South, and our children will live there, and we want to join hands with the whites in making the South the great section of this country it ought to be, but it can not be done unless the people are trained properly for that work.

It seems to me all that has been said here to you with regard to the necessity of the white boy and girl, whose parents have been free for a thousand years or more and who have had the best training the world can give if they need all this help certainly the people only 50 years out of slavery, if they live in this country and do their part, need this help that you propose to give, and I believe that when you come to look at it thoughtfully you will come to that conclusion. You will decide if you are going to give to any citizen of the country that you are going to give to all of them who need their proper share in these appropriations you are making. I simply want to put the matter in that light, that you might see it from that standpoint. Mr. Napier has something to say, but if you would like to ask any further questions I will be glad to answer them to the best of my ability.

Mr. McLAUGHLIN. You speak of one portion of the bill that meets your wishes and that you think is right. I wish you would read that into the record, and state where it can be found.

Mr. WALDRON. It can be found on page 13, section 16, beginning with line 15 and going through line 25.

Mr. McLAUGHLIN. Read it, if you please.

Mr. WALDRON (reading):

> And in any State where separate district agricultural high schools are provided for the Negro race the legislative authority of such State may divide the entire State into districts, providing in each district for one such school for the white race, and may divide the entire State into other and different districts, which need not be coterminous with those for the white race, providing in each such district for one school for the Negro race; but the total number of such schools for the white and the Negro races in such State shall not be less than one for each fifteen counties nor more than one for each five counties.

The only change that we desire to have made there, instead of saying they may do it say they shall do it, if they are to participate in the advantages of this appropriation.

The CHAIRMAN. The word "may" there means shall.

Mr. WALDRON. I did not understand it that way when I went to school.

The CHAIRMAN. In Virginia the law puts that interpretation on it.

Mr. WALDRON. Sometimes it does. When you deal with certain people it does, but very often it does not.

The CHAIRMAN. Very well. It is a technicality we need not discuss.

Mr. WALDRON. But it is through the technicality of things that we are sometimes thrown out. That is why we are losing out on this fund.

Mr. McLAUGHLIN. Have you amendments prepared?

Mr. WALDRON. We have suggested one, simply to give our idea with regard to it. We do not want to hinder, but simply to make a suggestion. I do not know, as I am not a lawyer, if the amendment is properly drawn.

Mr. MCLAUGHLIN. Your suggestion has been drawn up?

Mr. WALDRON. Yes, sir.

Mr. MCLAUGHLIN. And you have noted where it is to be inserted?

Mr. WALDRON. Yes, sir; we think it ought to be inserted at a certain place and we will indicate it.

Mr. MCLAUGHLIN. Are there not several places where amendments ought to be made, according to your idea?

Mr. WALDRON. We thought it ought to be repeated under all these sections—under sections 3, 4, 5, 6, 7, 8, and 9.

Mr. MCLAUGHLIN. In each of these sections you think the same words that you have read, or similar words, should be inserted?

Mr. WALDRON. Yes, sir.

Mr. WILSON. I now desire to present Mr. N. C. Napier, representing the National Association for the Advancement of Colored People.

STATEMENT OF MR. N. C. NAPIER.

Mr. NAPIER. I was pleased to hear the chairman say that the negroes of this country are agriculturists, and naturally and of necessity they are. Eighty-two per cent of our people are engaged in agricultural pursuits. We are giving our time to agricultural pursuits. We are satisfied to remain agriculturists in this country until by natural evolution we grow into other spheres of life.

We believe that this measure, as advocated by those who are interested in it, will redound to the great good of all the people of this country. We are willing to take our chances under it, provided we are given the assurance under this bill that our necessities will not be overlooked and will be taken care of as those of other people.

We as a class of people are anxious to grow into a common citizenship in this country. We aspire to be not ornaments, not puppets set up to look at, but useful, law-abiding, industrious, and productive citizens. As such we are trying to grow into that usefulness that will be approved by the entire country, and we only ask that assistance that all others have. We want to propose an amendment to this bill that will make it certain that we are included along with all other classes of people in every benefit that is going to come from the bill. We want you to say, gentlemen, in this bill that none of this money is to be appropriated or paid out in States where discriminations are made on account of race, color, or previous condition of servitude, unless provision is made for equal, although separate, accommodations for all classes of people. When you give us that amendment, we believe that justice will come to us.

Now, gentlemen, we are not moving along in this country as a burden to the people. We are sometimes called the white man's burden, but I differ with all those who say we are a burden to anybody. Who raises three-fourths of the cotton of this land? Who raises his proportion of the corn, of the wheat, of the hay, of the stock, of the cattle, and every sort of provender that we have? I think if you will go to those parts of the country where our people are largest in numbers you will find that we are not only productive enough to

sustain ourselves, but we are producing that which helps to feed and to clothe and to make happy the rest of the world and to enrich the men who handle these products after we have raised them. Do you know, gentlemen, that in the State of Alabama there is raised 1,700,000 bales of cotton and more, and in Arkansas 938,000 bales? I now mention the States in which our people live. In Florida, 95,000 bales; in Georgia, 2,800,000 bales; in Louisiana, 435,000 bales; in Mississippi, 1,200,000 bales; in North Carolina, 1,100,000 bales; in Oklahoma, 1,000,000 bales; in Tennessee, 45,000 bales; in South Carolina, 1,700,000 bales; in Texas, 4,200,000 bales. There is where the negroes live, and in all, there are over 16,000,000 bales of cotton. Now, if we are raising three-fourths of that, and, as the figures will show, we export 8,000,000 bales, we consumed 2,500,000 bales this year, and in that 2,500,000 bales, 57,000 bales are included that were destroyed by fire at Houston, Tex. Now, gentlemen, if as agriculturists we are raising three-fourths of that, either as owners of the land or as men tilling the land of other people, or as tillers, and we are exporting 8,000,000 bales of that 16,000,000 bales, and we only consume 2,000,000 bales, with 6,000,000 bales still on hand, I do not think you could call the people who do that sort of work a burden to anybody.

What we are doing to cotton we are doing to every industry in the land, from bee culture, chicken raising, to that of raising the finest stock in the country—at least some of it.

The CHAIRMAN. Let me say to you that Texas people tell me that the bulk of that cotton—of the 4,000,000 bales there—is raised by the white man. That is what they tell me.

Mr. NAPIER. That is more generally the case in Texas.

The CHAIRMAN. I am the only man here from the South, but if there were any men here from Texas I am confident they would substantiate that statement.

Mr. NAPIER. That is all right as to Texas more generally than in any other State, but in all of the other States it is as I have stated, so that it brings the general average down to three-fourths as being produced by this negro labor. Gentlemen, this cotton is being produced by the old methods that were learned from the owners of these men 50 and 100 years ago, and they are now getting less out of the acre than they ought to be getting; and what we want and what some of us have been struggling for for more than four years here under this Morrill Act is to give our people some of the advantages so that they may grow two bales where they now grow one, and you will not blame us for that.

Now, gentlemen, in the Morrill Act of 1862 no provision was made as to the distribution of this fund among the colored people, and I believe the State of Virginia, and probably Kentucky, were the only States where any part of that fund went to the benefit of the colored man, so that labor in 1890 saw the disadvantage that that was working to the colored man, and they passed the act of 1890 and specified that certain portions of it should go to the colored man.

Now, one would think that he would get what was due him there. Although we have the law behind us, although that law ought to be executed to the letter, there is not a State in the Union where the black man is getting his due under that law. I have some general knowledge of most of them. In Alabama we are getting more than in any

other State. In Mississippi we are getting a small proportion; in Kentucky some of it; in Virginia some of it. And I forgot to mention the number of bales of cotton raised in Virginia—some 25,000, I believe. We will take Tennessee, for instance. The act of 1890 provides that where discriminations are made, before one dollar of this money can be expended there shall be a college established for white people and for negroes. Now, let us see how we get around that in Tennessee. I am a native-born Tennesseean. I have lived in the South all my life except the few years I have spent away, as I am spending a few temporarily here now. I am as largely interested in this agricultural work of the individual as I can be, because I have a great deal, from my small standpoint, depending upon it, and I do not want to say one thing that is detrimental to the good name of Tennessee. Yet I know they have gotten around giving us what we ought to have there for years and years. For instance, the constitution of the State of Tennessee prohibits the education of the two races under the same roof in the same school; yet Congress and the Secretary of the Interior come along and say, before you can use this money you must either have a school in which no discriminations are made or two colleges. They say all right, we will pass an act here to show that no discriminations are made. The Legislature of Tennessee enacted a law providing that no discrimination shall be made in the State University at Knoxville on account of race, color, or previous condition of servitude.

Just think of it, contrary to the constitution of the State, contrary to all practice, contrary to the feelings of the people in that State. They enact that law, and say, now, Mr. Secretary, we will make no discriminations, and you turn this money over to us. The law provides that money shall be turned over to some officers of the State and by that officer paid to the treasurer of the white university and of the negro college—white college and the negro college. Instead of doing that they designate, not an officer of the State, but they designate the treasurer of this university, and he pays the money out as the agent of the State and of the Government to himself as the treasurer of that school and makes his report to the Secretary of the Interior, and do and say what we can we have not been able to get the ear of the Secretary of the Interior to show him that every dollar that has ever been paid out under that act of 1890 has been illegitimately paid out or misappropriated under the terms of the law. It may have been honestly paid out, but I believe an investigation by Congress will show that none of it has been paid, and that under these conditions the duty of the Secretary of the Interior would be to suspend further payments to the State of Tennessee until it had made restitution of every dollar that was misapplied.

The CHAIRMAN. You do not think that Congress can regulate the domestic laws and arrangements of a State, do you?

Mr. NAPIER. No, sir.

The CHAIRMAN. That is your natural deduction.

Mr. NAPIER. But, Mr. Chairman, I believe that Congress has the power to investigate and see how its own moneys are being paid out, and if they are not being paid out under the law, then they should call a halt.

Mr. HAWLEY. Are students of the negro race being admitted to this college?

Mr. NAPIER. I will explain. Two years ago we raised that question. I have learned of one negro student who asserted his determination to go to this school, and the boys in the school just rose in arms and said, "We will never admit him here." I will not quote some of the unpleasant things that I am told they said, and told from good authority.

The CHAIRMAN. But you do know that the feeling there is such that it would not be pleasant.

Mr. NAPIER. It could not be done for a moment. There is another law in our State which says that no part of this money shall be applied to the support of any denominational school. In face of the fact that the constitution provides there that the races shall not be educated in the same school and in the face of the fact this provision is made in support of a denominational school, they go to work and constitute a part of the neighboring negro college, a Presbyterian college and part of the State university, and say we will call this the negro department of the agricultural department of the State university, and by that, through that technicality, they undertake to accomplish their desires. I have consulted time and again the negro students of the Knoxville college, asking them if they were members of the State university, and asked them whether they knew that their names were carried on that catalogue, and I have yet to find one from the senior class to the freshman who knew he had any connection whatever with the State university. Those are the things under which we suffer, and I believe we are about as well off in Tennessee as anywhere else. I have had the option of changing my residence ever since I first left there, a boy of 16 years of age, and each time I have had the opportunity to go away I have felt I must go back, as I feel now, and as I shall do, for I love Tennessee. I love the South just the same as every other man loves his section of the country.

Mr. LEVER. Do they give of this money they receive from the United States Government—do they give a part of that to this Presbyterian college that you mention?

Mr. NAPIER. They are now, and within the past three or four years.

Mr. LEVER. Do you know what proportionate part they are giving to it?

Mr. NAPIER. They have gotten about $3,000 in the last four years, and this year they are giving us about $7,500; perhaps $8,500. I do not remember exactly; but we have never gotten our full proportion of it, and I wish I could get the ear of some authority that would see that we simply get what the law provides for us. I have gone to the Commissioner of Education, and when I placed this matter before him he simply said, "Well, we are doing the best we can," and unable to explain. I have yet to find the man who could explain why we are not getting what we ought to have and justify themselves in the course that they are pursuing except to say, "We are doing the best we can."

Mr. HOWELL. These limitations you speak of are not found in the Morrill statute, but in the constitution and statutes of Tennessee?

Mr. NAPIER. Yes; as to the denominational provision and as to the law providing there shall be no discrimination on account of race, color, or servitude.

Mr. HOWELL. Those are the limitations you mentioned?

Mr. NAPIER. Yes, sir.

Mr. HOWELL. They are the laws of the State?

Mr. NAPIER. And in the State constitution.

Mr. HOWELL. And they are not found in the Morrill law or any of the United States statutes?

Mr. NAPIER. Well, no. The Morrill law provides that where discriminations are made in the State there shall be an institution organized for the education of the whites and another for the education of the negroes, and that this fund shall be equitably divided between the two colleges.

Mr. HOWELL. The Morrill law provides that?

Mr. NAPIER. Yes, sir. The Morrill law proper is the act of 1862.

Mr. HOWELL. I thought there was no provision in that.

Mr. NAPIER. There is not. There is no provision in that, nor is there in the act of 1887 establishing these experiment stations. But in the act of 1890 you find the provisions I have just mentioned. Gentlemen, as agriculturists, we ought to have the attention of these men who are going around the country and holding these farmers' institutes. It is published that a farmers' institute is going to be held in Nashville in Watkins's Hall. No colored man thinks he is invited to a meeting that is held there.

The CHAIRMAN. Let me tell you something. You must be fair. You go over to the Agricultural Department and ask for Mr. Wilson, go over to the Bureau of Industry and ask for Dr. Galloway and Dr. Knapp, and they will tell you that the same opportunities that the white man has the negro has in the South, and as to these meetings, they can go to them if they wish to.

Mr. NAPIER. That is right; but there is a condition in the South that prevents him from going there.

The CHAIRMAN. You are coming to the point right now. You can not break down the race feeling.

Mr. NAPIER. I do not want to attempt that; but I do want, while they draw these lines against us, when it is always to our disadvantage, to allow us to have the advantage of it when its execution will give us the advantage.

The CHAIRMAN. You seek to make the wrong impression on this committee when you say there is any distinction made against the negro in the South along the lines you have been speaking.

Mr. NAPIER. Mr. Chairman, I do not want to make a wrong impression anywhere, because the very best of it is bad enough. But I do know that in these cities—in this very city—if a farmers' institute were called, and it were held in certain halls in this city, you would not find a single colored man to go there, and it is just the same thing down there.

The CHAIRMAN. We come back to our starting point. How can you make white people enter into fellowship with them? You can not do that by law.

Mr. NAPIER. That is just it. We do not want them to go there. This law of 1890 says we shall have our share of it. What we want is our share set aside so we can go and make use of it for ourselves. That is what we are after.

Mr. McLAUGHLIN. Would it be necessary to hold two institutes here in Washington?

Mr. NAPIER. It would; yes, sir.

Mr. McLAUGHLIN. Hire two halls and have two lectures?

Mr. NAPIER. If you want to give the black man the advantage he ought to have, you would have to do it under our system; but it is an entire mistake for anybody to think that any intelligent negro in this country wants at any time to thrust himself socially on anybody, and when I say that I believe I represent the feelings of every negro in this country. We have our own society, we have our own associations, and we do not want them interfered with.

Mr. HAWLEY. Would it be necessary to send colored people there to lecture?

Mr. NAPIER. Not necessarily. And yet the best results that can be gotten from teaching our people are to be gotten from the level-headed men of our own race who go among them and who feel like they do, who get next to them, and who teach them and try to raise them in the scale of life.

Now, Mr. Chairman, what we want is to show you that we are moving right along this line. I have a pamphlet here that comes to me from Atlanta, where the Atlanta Normal and Industrial Institute held a mass meeting in January last, and at that mass meeting all that was said and done there was indorsed by the Atlanta Constitution and by all the prominent bankers, the mayor of Atlanta, members of the legislature, governor of the State, and everybody, and in that meeting one of the speakers said this—and this is just what we want you to provide, gentlemen, that we get just the things that have been claimed here by others, and our people want to do whatever work anybody else does and make ourselves as useful as other people. Said Dr. James W. Lee at that meeting: "What the negroes need is to build a cotton gin, or a sawmill, or a foundry, or a blacksmith shop near enough to every schoolhouse and college for the students to alternate between one and the other." You see, that is the very idea that we preach.

Mr. McLAUGHLIN. Did a colored man say that?

Mr. NAPIER. No, sir; a white man, in giving advice at this mass meeting of colored people, and it was applauded by them.

The CHAIRMAN. That confirms what I told you awhile ago—that the colored man is getting what the white man does.

Mr. NAPIER. That is what we want to do—to provide so that we may get the benefit of these things, that we may get the benefit of this law as well as to suffer any of its disadvantages.

The CHAIRMAN. You know when you get these schools you will do it. You know the condition the negro race is in now. It is not advanced far enough to get the benefits, and that is what you need.

Mr. NAPIER. I beg to differ with you there. I think I lived in the heart of the South and in the hearts of the people about as closely as anybody, and my opinion is that the negro boy is just as ready for that as any other boy, if you will give him the chance.

The CHAIRMAN. You are vastly mistaken on that point.

Mr. NAPIER. Well, we will agree to disagree.

The CHAIRMAN. Everybody in Virginia, including myself, is perfectly fair to your race in every particular.

Mr. NAPIER. I do not deny that. I will read the balance of what I started to read:

As fast as you pour learning into their minds in the schoolhouse, show them how to go into the shop and pour it out in the manufacture of plowstocks and wheelbarrows and corn shellers and wagon wheels and sausage grinders. This kind of learning will not teach them how to fly like an angel, but it will certainly enable them to walk the earth like free and useful men. The best modern learning is now devoted to showing human beings how to live to-day and in this world. The best preparation we can make for to-morrow and the next world is, by the grace of God, to do our best to make the present one sweeter and cleaner and purer and higher. A paradise in which to sing in the sweet by and by is a good place to look forward to, but it is well to remember that we can sing no note over there that we have not learned to strike over here.

Mr. MCLAUGHLIN. Who says that?

Mr. NAPIER. Dr. James W. Lee, in his address. He is from St. Louis.

The CHAIRMAN. Is he a preacher?

Mr. NAPIER. I do not know. I find here in this pamphlet the check of Hon. Courtland S. Winn, mayor of the city of Atlanta. He is the mayor of all the people.

Mr. MCLAUGHLIN. Did he talk in the same vein?

Mr. NAPIER. Yes, sir.

Mr. MCLAUGHLIN. Does that kind of talk properly represent the feeling of the people of that section of the country toward the negro?

Mr. NAPIER. I believe that it does.

Mr. MCLAUGHLIN. Do they practice what they preach?

Mr. NAPIER. That is it. I have told you what the statutes of the State of Tennessee provided.

The CHAIRMAN. I will answer my colleague. That seems to be a reflection upon these people, upon their integrity and honesty. If you will come to Richmond I will show it to you.

Mr. MCLAUGHLIN. I did not intend any reflection. I know sometimes men do not practice what they preach.

Mr. NAPIER. I can not just state where it is in Alabama; but a few days ago I had an article which said that the appropriation for negro schools in a certain county per capita per year was 32 cents, and the appropriation for white children in the same county was $15.50. It is altogether how you look at things.

Mr. MAGUIRE. Does that include high schools? Or was that the common-school system?

Mr. NAPIER. The common schools.

Mr. MAGUIRE. Does that same proportion of expenditure exist, according to your idea, throughout that country?

Mr. NAPIER. No, sir; I do not think it does.

Mr. MAGUIRE. What do you consider is the fair average?

The CHAIRMAN. That is the exception.

Mr. NAPIER. It is not the exception I am after; what I want is to get the rule. You go through the South and you will find the negro schoolhouse a little shanty, or you will find it a rented negro church; you will find the winter wind sweeping under it, and you will find it improperly heated in winter and improperly ventilated in summer. You go to the white school, and you will find a large entrance for teams and for children's horses and ponies; stables made surround-

ing or sheds surrounding that school in which they may take care of their vehicles, and a large ornamental pair of steps going up over the fence on one side and down on the other; a beautifully worked yard in front, trees set out, flower beds—a beautiful schoolhouse.

Mr. MAGUIRE. It seems like a very elaborate system you have down there.

Mr. MCLAUGHLIN. Is that due to the law, or the administration of the law?

Mr. NAPIER. The administration of the law.

Mr. MAGUIRE. The law gives an equal appropriation of the State funds to the education of all children in this State.

The CHAIRMAN. I would like to state right here that this discussion is taking a broader latitude than is contemplated under this bill; that this speaker is not discussing the measure before us, and is going into details of conditions in one State particularly of which he can speak, Tennessee. If he thinks these matters he speaks of apply to Virginia I just want to say that he is absolutely and entirely mistaken, and I make the point here that there is no use in discussing the conditions in those States, or the relation of those States to every different citizenship, and it is not germane to this discussion. I appeal to Mr. Wilson, who is the author of this bill, to confine the speakers to the subject matter in hand.

Mr. WILSON. I feel, as the Chair feels, relative to this particular discussion, that the part of it that the speaker has recently been dealing with is not pertinent to the subject matter of this bill. But as the members of the committee have been asking questions relative as to what he has to say, I did not feel that it was within my province to interfere with the desires of the committee to be informed as to the local conditions existing in the various States which Mr. Napier has referred to.

I would like, Mr. Chairman, if we possibly could, to reach a conclusion of the hearings to-day, and I have one other gentleman that I would like you to hear before this meeting closes.

Mr. NAPIER. Will you allow me to close in a minute or two? Mr. Chairman, when I came here this morning I felt that I might be intruding upon grounds on which I would not be justified in doing, but when I remembered how these matters had been gone into the two or three days that I have sat here with regard to the States of Iowa and Wisconsin and other States, I thought I might be justified in going into it with regard to Tennessee and with regard to some others, and I have had the opportunity to acquire some knowledge of conditions even in the State of Virginia, and I know that our people are not getting what other people are getting, and I believe the laws of this land provide they should get it, and if we are not getting it under the laws as they exist, then what we want is to do the thing that will give it to us in the future.

Now, Mr. Chairman, one further word in regard to the charge that the people of this country are getting away from the farms. The great reason why our people are getting away from the farms is because we do not have school facilities on the farms and in the country that we have in the cities, and every negro is now aspiring to have his children educated—educated not to have education as an ornament, but to get it as a means of serving his kind, serving the community, serving his country, serving the people of this country

as best he can, and all that we ask is that when this law goes into effect it shall have such provisions as will guarantee us these privileges.

Now, I do not yield to any man in my admiration of the people with whom I live. I think I have now and always have had their esteem and respect. They know what my motives in life are, and I have not only undertaken to labor for the upbuilding of my own people, but I have always had an eye single to the welfare and upbuilding of the people of all of that part of the country in which I live. Mr. Chairman, I thank you very much.

Mr. WILSON. Mr. Chairman, I want to present Rev. Dr. H. C. Garner, representing the National Association for the Advancement of the Colored People.

STATEMENT OF DR. H. C. GARNER.

Mr. GARNER. Mr. Chairman and members of the committee, this bill is of vast importance, particularly to the people represented by the National Association for the Advancement of Colored People. It aims at industrial betterment. Our population is an industrial population. Of the number of people we have in the Southland 95 per cent of them are engaged in 27 different occupations, and these refer to personal service and to agricultural pursuits, and a small percentage to professional life—too small, indeed, to be counted—and there is also a smaller percentage in the mechanical pursuits; so you see the large factor of our people is engaged in agriculture and industry.

This bill aims at the poor boy. I am sure if that is true you will recognize that we have certainly a right to speak on this matter. Our people need the kind of training that this bill proposes to furnish, and let me say here, too, we have nothing to say against the bill. We favor its spirit and its purpose, and we believe that the education of the weaker people of the land is an absolute necessity if we would raise even the average efficiency in the nation. We claim that all education ought to tend toward equalization in the sense that every citizen is made able to get along with other citizens and is made able to be reciprocally advantageous to other citizens. We believe the kind of education that ought to do that is that kind which helps the largest number of people in the vocations they are likely to follow in the communities where they live, and that they ought to have this because they will help themselves and because they will help the nation by helping themselves. I claim it is taking away from the national strength to have an acre of ground yield a half bale of cotton where it may yield a bale and a half, and if the negro is allowed to stay on the farm and work it with little instruction, that the nation is robbing itself of resources when it robs this poor man of the information required to add to his already blind industrial energy, and we believe that you can help us in this matter by passing some such bill as this we have.

I would like to say also that we would like in this bill a guarantee to the negroes of the Southland of a certain definite rate, if this bill should be passed. Not that we fear our friends in the South—we do fear it, frankly speaking—might be called upon to give an exact pro rata percentage of the funds that might be allotted to the various

sections. But that is not the basic reason. We want to make sure of the matter. In the country places, where this fund would probbly administered, there might be a reason to doubt that the regular percentage might be given to the colored people if there was no direct suggestion about that in the bill. We can say that we as a people are weak, and I sometimes like to reason it out in this way: If the negro is the equal to the white man, he needs equal training. If he is the superior of the white man, then he needs less training. If he is the inferior of the white man, then he needs more training to bring up the equalization in the great democracy of which we are a part.

In the Southland we have the fundamental—coal, cotton, and corn—and, by the way, these represent a symbol of the color of the people as well—the white and the black and the yellow. So down in this country we have the fundamentals to deal with, and the kind of education this bill proposes makes us efficient in handling these elements. We want to be better agriculturists; we want to be better mechanics. The factory phase of this bill does not so much interest us because we have so few factories. We are beginning to have a few in North Carolina and South Carolina, but that phase does not particularly appeal to us just now. But of the 4,000,000 workers we have, 83 per cent of these workers are in the ordinary pursuits, where the kind of help this bill offers would help us materially. The kind of help it offers is not required by the college graduate.

Mr. LEVER. Have you a factory in South Carolina? Have you a cotton factory in South Carolina?

Mr. GARNER. I think there was something of the kind in the northern section; I understood so—near Columbia. I might be mistaken on that.

Mr. LEVER. I think you are.

Mr. GARNER. That will not vitiate this argument, and the factory phase to us is not very material anywhere. But the agricultural phase is and the carpentry, but in the trades we are far behind what our forefathers used to be without any education or preparation at all. We have not kept up because the demand for it has not been properly shown to us, and in the trades we are far behind—blacksmithing and carpentry and masonry. But our people have been taking after those pursuits which have caused them to get along in an easy way; they are pursuing the line of least resistance, and they thrive in personal service and waiting, and in those fields there is opportunity to rise, and we help you when we have better cooks and better seamstresses and better agriculturists and better blacksmiths. The race helps the white race as well, and the whole race should be elevated if we are to compare with the other people of the world, for the negro can pull the white man down if he is not lifted up.

Mr. WILSON. As there might be a false impression left in the minds of the committee by one of the statements made by Rev. J. Milton Waldron, I want to say the labor organizations, as a rule—there might be some few exceptions—do not refuse to take into membership colored men. As a matter of fact, labor organizations have large numbers of colored men in their membership. Personally, I belong to a labor organization that has several thousand colored men in its membership and which was represented in the State of Kentucky for a great many years—and that is one of the Southern States—in the secretaryship of that district of mine workers by a

colored man by the name of W. C. Campbell. That same man was a member of the national executive board, of which I was a member, and on which colored men have been members of that board—two of them, Mr. Richard Davis and W. C. Warren, of Ohio. Now, that is not because of social equality or anything of that kind. The matter of social equality is a matter for individual determination. Distinctions are made even among races. White men make distinctions among white men as to whether they will associate with this, that, or the other white man, and those distinctions are also made between races as to whether you will associate with this, that, or the other man. It is a matter that belongs purely to the individual as to what his social selections shall be, so that the taking in of colored men into the labor organizations is not a question of social equality or anything of that kind. It is purely a matter for the individual. But it is a recognition of the fact that colored men are employed industrially as white men are employed industrially, and consequently in the industrial field they have at least a mutual interest, and so most of the labor organizations, if not all, admit to membership in the organization members of the colored race who are engaged in the same line of occupation. But most of those organizations also have standards of efficiency that they insist upon in the membership in the organization, and whether the man is white or colored if he does not meet that standard of efficiency he is not admitted to membership.

I make this statement so there will be no misunderstanding on the part of the committee relative to the position of labor organizations in dealing with the colored man.

Mr. HAWLEY. Have you in connection with the working out of this bill or anyone interested in it worked out schedules of work, or a curriculum, for the purpose of carrying into effect the bill if it should be enacted into law?

Mr. WILSON. No, sir.

Mr. HAWLEY. That matter is all yet to be worked out?

Mr. WILSON. That matter would have to be worked out, and it would be, to a great extent, a matter of demonstration—the work proposed by this bill.

Mr. HAWLEY. You propose that the boys and girls who would be affected by the bill should spend part of their time in the ordinary schools and a part of the time in some factory at industrial work?

Mr. WILSON. Not necessarily so. It provides for the training of the child in the elements first.

Mr. HAWLEY. The elements of what?

Mr. WILSON. In the elements that go to make up all the industries and the necessary application of them. For instance, I had a boy who was studying the square root and the cubic root, and so on. He was that far advanced in his classes at a time when I was building a little addition to my house. The mason came to lay the foundation for it. The boy had no particular interest in his studies because he did not understand the application of them. When the mason came to lay the foundation and to square his foundation he measured 8 feet along the one side and 6 feet along the other, and then brought the two walls out until they were 10 feet apart and both the boy and myself were standing there, and I asked him if he saw the application of what he was studying in the work of the mason, and he said he did

not. I asked him how he would arrive at the hypotenuse of the right-angle triangle, and he had the rule at his finger ends. I asked him, then, to square those two sides and get the square feet. He did that and found it was 10 feet. Now, I said to him, there is the application of the work, or one of the applications of the work you are engaged in.

This mason used these figures because it was one of the easy problems to work out, and so he measures 8 feet along and 6 feet along, making the total of the squares, and the square root of it is the simple proposition of 10, and so he figured out the hypotenuse and he knows it is a right-angle triangle, and the boy took a greater interest in that particular study after he knew there was a practical application of it.

It is the purpose to teach the children in the elements to begin with, and then, secondly, those who are engaged in occupations when they have reached the age they can be engaged, to either give them the opportunity of working part of the time at the occupation they are engaged in and spending part of the time in the schools so they may get the fundamental application at the same time, and, in addition to that, to give those who are working full time at their occupation the opportunity of spending their days at the occupation and their evenings in the schools, so they may get jointly the fundamentals in their respective callings and the practical training at the same time.

Mr. HAWLEY. In cases where there are no factories or industrial works that the boys could attend and thus get the practical knowledge from actual work, is it the intention of the bill to build shops in connection with the schools, so as to train them for some work in some other place?

Mr. WILSON. In many of these schools equipment will be necessary. For instance, equipment for domestic science will be necessary in schools dealing with that to a great extent, and in other schools where the practical operations were not available it would be necessary to put in a sufficient amount to give the child not only the idea of the technical work or technical methods of doing the work but to give him and give his muscles the practice and development in the application of these technical studies he has been engaged in. In other words, it is the idea to train the mind and the muscle at the same time.

Mr. HAWLEY. My purpose in asking you this question as to whether you had worked out any tentative studies was to introduce them into the record, as it would be a good illustration of the bill.

Mr. WILSON. That has not been worked out, and if you will allow me the 10 minutes between now and 12 o'clock I would like to present Mr. Holder.

The CHAIRMAN. We will hear what Mr. Holder has to say, and then we will have to discontinue these hearings, as we have other business to attend to.

STATEMENT OF MR. ARTHUR E. HOLDER.

Mr. HOLDER. Mr. Chairman and gentlemen, in the few minutes I shall consume I promise not to weary you. I sat patiently but very much interested during the last three or four days listening to the testimony of all of these people. I have come to the conclusion that you do not want any further information with regard to the bill and that you are thoroughly alive to the importance of it in every par-

ticular. There are one or two little things that possibly may be helpful to you to be able to see the vast scope of its purpose and to see also the universality of the bill. That is the great preeminent feature that the bill possesses and what interests the organizations in the American Federation of Labor, because it reaches out to the counting-room, to the drafting room, the factory, the shop, the farm, to every place where human activity is being exercised for the sake of producing wealth.

I would like to quote to you some figures from the Twelfth Census of the year 1900. I am sorry that I have not the latest data gathered for the Thirteenth Census. This bill, in case it is enacted and becomes a law, will deal with the people engaged in gainful occupations. Twelve years ago, in 1900, there were 29,073,233 such persons so employed. They were subdivided into five grand divisions: The agricultural laborers, 10,381,765, or 35.7 per cent of the whole; domestic employees, 5,580,657, or 19.2 per cent; trade and transportation, 4,766,964, or 16.4 per cent; manufacturing and mechanical, 7,085,309, or 24.4 per cent; and professional 1,258,538, or 4.3 per cent of the whole. The last class or group that I refer to are all fairly well looked after, with the high schools and colleges and universities and with the personal means possessed by them that enables them to get the necessary education to equip them for their life work; but for the balance of the 96 per cent of the people engaged in gainful occupations this bill would make some provision, and it is because of its great universality that we stand behind it and plead with you to help us get it enacted during this session of Congress if possible. I just want to speak of one feature. I stand before you to-day as an expert mechanic, not wishing to draw any personal allusions. I can make anything that any other man on earth can make of cold metal, and have constructed all kinds of machinery. I merely refer to this as an illustration of what we would like all our mechanics to be. Now, I can specialize in any part of my business, the same as you who are attorneys can in any part of your profession. You had your thorough training first, before you started to specialize, the same as a medical man; before he starts to be a specialist he is generally prepared and is supposed to be a general practitioner.

The danger in industry to-day, Mr. Chairman and gentlemen of the committee, has been vividly portrayed to you by others. I am not going to dilate upon it, but I see it coming, because of the practices and management in our shops and factories, where they taken an individual workman, young and inexperienced, and make him merely a specialist in a rut, without knowing anything whatever concerning the business generally. What this bill will do is that it will take the young man, 15 or 16 years of age, who comes into the shop, and it will give him an opportunity to learn the whole avocation, so that after he finishes his apprenticeship or graduates, or becomes efficient, he will be able to specialize or choose for himself and thus become an intelligent, efficient, independent workman. His tongue will be loosened, he will be better able to speak for himself, he will be able to stand upon his own feet; our citizenship will be strengthened, and, not the least of all, he will not hesitate to take to himself a wife and raise for himself a family before he reaches middle age for fear he won't be able to make a living, and that is one of the conditions that is

now facing us. I do not know that you have seen it as vividly as I have. But this bill affords an opportunity to do great good; and I thank you for the time you have given us. I hand you herewith a pamphlet and ask that it be included in the hearings; it is a very concise document, produced at great expense by the American Federation of Labor. It covers this whole subject, as it appiies to trades, and as the system is in vogue in other lands. I ask to have that included in the hearings to follow my statement.

Mr. HAWLEY. Have you put anything in the record as to the attitude of labor organizations toward the employment of and training of apprentices?

Mr. HOLDER. The pamphlet I hand you covers that phase, and it illustrates, through the law of self-preservation, why journeymen mechanics should protect the apprentices. I will give you an illustration: In the year 1900, when I was living at home in Iowa, in the center of the State, there was a railroad shop where there were 4 journeymen mechanics and 53 apprentices. There is the other extreme. There was no organization in the shop. When the boys got out of their time they could not get journeymen's pay, and the employers got rid of them and took on more cheap help. In course of time that shop was organized along with the other shops along the system of the Rock Island Railroad, and the last report I had from there was they had something like a hundred skilled mechanics, and they had a proper proportion of apprentices. When the apprentices came out of their time they were journeymen mechanics, and were able to obtain for themselves a decent living. That is indicative of the general rule in order that when a boy has learned his trade that he will be assured of an opportunity to make a decent livlihood after he comes out of his time. The general disposition among our organizations to-day—and you will understand that there are 120 separate trades in the American Federation of Labor—is to take and give the young man as complete a knowledge of the business that he is learning as it is possible for us to do without interfering with our employer's business. We frequently come into conflict with the employer because of that, as he wants to make all the money out of the boy that he can.

Mr. WILSON. Is it not true that many of these organizations maintain educational features, technical educational features, in their trade papers—in their organization papers?

Mr. HOLDER. Not only that, Mr. Wilson, but they have special classes in the evening. In my own trade, in practicall all of the large centers, we appoint certain journeymen to take charge of the apprentices' lodges, and they describe the theory of the business to the boys, and the boys are intensely interested. We do that at our own expense and do it in order to maintain the ethical side of our trade and make the boys feel they should appreciate the worth of the men they work with. That is being done in the larger trade organizations, but it is not efficient; it is not complete; it is not what we would be able to get except through a bill of this kind.

Mr. HAWLEY. Have you any equipment in connection with these schools?

Mr. HOLDER. No, sir; we have not provided that. We use the blackboard and chalk to make our illustrations for the boys and they

provide their own drawing instruments, and will bring along the books of some of the other members of the family who are in the high school.

Mr. HAWLEY. You have the equipments in the shops where these boys work?

Mr. HOLDER. Yes, sir.

Mr. HAWLEY. And the schools are conducted with the view of teaching the boys the things they ought to know in connection with their work?

Mr. HOLDER. So that they have an absolute comprehension of what they are doing when working by hand.

At 12 o'clock meridian the committee adjurned sine die.

Amend section 2 by adding the following words, beginning on line 2, page 4: "*Provided*, That no money shall be paid out under this act to any State or the District of Columbia for the support and maintenance of a school of secondary grade, State college of agriculture and the mechanic arts, agricultural extension department or division, separate industrial or home economics school, district agricultural high school or branch station, where a distinction of race or color is made unless provision is made for the equal though separate accommodation of the colored people in proportion to their populatin, as shown by the Federal census next preceding the year for which such allotment is made: *Provided further*, That the Secretary of the Interior, upon knowledge of racial discrimination, shall withhold any part or all of the funds to which any State or the District of Columbia may be entitled under this act until said racial discrimination shall be corrected."

INDUSTRIAL EDUCATION.

FOREWORD.

Of the great educational work which the American Federation of Labor has done during the past quarter of a century the public in general has no conception. Mere statistics are wholly inadequate to convey the value of what has been accomplished.

The American Federation of Labor has received special acknowledgment and appreciation for data furnished in response to the ever-increasing requests from educators, statisticians, students, National and State legislators, and others engaged in the study of sociological problems.

It is confidently expected that the next decade will witness further great developments in the application of a sound system of education. The line of progressive industrial education must be constructive. Any system to be of value must also necessarily be one of growth. The adoption of a scheme of education must train up a far more capable and comprehensive body of citizens by emphasizing their position in society as producers, consumers, and as men. A general educational policy which will greatly ease the strain of demoralization which so sadly affects the children of the poor. It ought, by giving vocational training alongside of cultural training, advance them more at the age of 16 than now obtains at 18.

Assuming, then, that the social stratification in America is vertical, the problem is to find the highest elevation which any youth's ability will permit him to reach, and to get him to that elevation.

Apropos of this problem, the size of which is the length and breadth of America, and because of the interdependence of industrial effort, the American Federation of Labor has undertaken a comprehensive study helpful toward its solution. The progress made and reports issued have already had a salutary effect upon educators, employers, the press, and the public in general. Economic considerations plead for the creation and multiplication of opportunities for industrial and technical education, and to the attainment of those laudable purposes this pamphlet is dedicated.

PRESIDENT GOMPERS'S REPORT.

In his report to the convention of the American Federation of Labor, held in Toronto, Canada, November, 1909, President Gompers said, under the caption "Industrial education":

The American labor movement is in line with, and has given expression to, the best thought for the education of all the people in all the elements of learning. It is especially interested in the further education of the wage workers of America, industrially. At several conventions the American Federation of Labor has gone on record upon these subjects, and at Denver last year the following resolution was adopted:

"*Resolved*, That the president, in conjunction with the executive council of the American Federation of Labor be, and is hereby, authorized to appoint a special committee of at least 15, to be composed of a majority of trade union members of this convention, who will serve without compensation and incur no expenses other than necessary and legitimate expenditure within the judgment of the president and executive council, to investigate the methods and means of industrial education in this country and abroad, and to report its findings, conclusions, and recommendations to the next annual meeting of the American Federation of Labor."

In accordance with this instruction the executive council with me endeavored to constitute a committee, but there was some difficulty in accomplishing that result by correspondence. Later, and during my absence from the country, the committee was completed, detailed report of which will be communicated to you in the report of the executive council.

Two meetings of the committee on industrial education have been held; one in New York City during the summer, the other at Washington, D. C., last month. The latter I was privileged to attend. Prior to my departure the executive council directed that I make an effort to learn some of the present conditions of industrial education in European countries as well as the position which organized labor there takes toward the subject. With the important duties devolving upon me while abroad, there was little time to make a careful study of the systems in vogue, but the best that has been said and printed upon the subject has been gathered in printed form. Nowhere in all the countries that I visited has there been an expression of organized labor other than in full indorsement of the best methods to educate the workers industrially as well as along lines of the arts and sciences; and thus there is the universal declaration of the organized workers upon this great question.

It may not be interesting here to call attention to the ignorant, reckless, and vindictive hostility which the Post-Van Cleave-Parry-Kirby National Association of Manufacturers has manifested toward the American labor movement. When our conventions declared in favor of industrial education, and particularly since the authorization at Denver for the creation of a special committee to pursue the study of the problem and to report, the most malignant misrepresentations of our purposes and aspersions upon our character were the utterances of these men who, judging us from their own narrow standpoint, charged us with perverting the purpose of industrial education. Our own work in this and other fields of activity, the results achieved and yet to be achieved, must and will stand as our best answer.

The American labor movement appreciates the fact that experience has shown that education, industrially, is but one phase of the growing recognition of labor's rights, and that in this respect it is closely related to all the general work of the trade union movement, the movement which has since its inception stood for constantly increasing better opportunities, better factory and labor conditions, better home life, and the protection of the young and the innocent children from exploitation.

Organized labor has always been and is now deeply concerned with the well-being of the human family and all the influences that go to make for the advancement of the industrial workers. In our principles and purposes are comprised the fullest scope of human activity. Labor has always manifested its humane interest in the welfare of children; it realizes that industrial education has the same purpose and aims—that is, to secure cooperation of all human agencies which make for the betterment of mankind.

Industrial education, the raising of the age limit of child workers, and compulsory school attendance are necessarily a part of the one great beneficial

scheme. Organized labor has always stood for, aye, has been the pioneer in, the demand for free schools, free textbooks, compulsory education in the elementary grades, and for the fullest and freest opportunity in all lines of learning, technology included.

The subject of education, industrially, concerns not only the wage earners themselves but every inhabitant of the Nation. It is, therefore, necessary and eminently proper that it be administered by the same authority and agency which administers our public-school systems and such other institutions as are concerned in the public welfare.

Already reference has been made to the false position in which some elements of employers would place our movement upon this subject. All we ask of fair-minded men is a comparison of the utterances of our opponents with our own. We contend that education in America must be free, democratic, conducted by, of, and for the people, and that it must never be consigned to, or permitted to remain in, the power of private interests where there is sure to be the danger of exploitation for private profit and willful rapacity. Under the pretense of industrial education private agencies for personal profit have perverted the term, resulting in a narrow and specialized training, to the detriment of the pupils, the workers, and people generally.

Modern methods of manufacturing, with their division and subdivision and specialization, have, to a large extent, rendered nearly superfluous and therefore largely eliminated the all-round skilled worker. Some so-called modern apprenticeship systems are narrow, producing a line of trained "specialists." It has been well said that specialists in industry are vastly different from specialists in the professions. In the professions specialists develop from the knowledge of all the elements of the science of the profession. Specialists in industry are those who know but one part of a trade and absolutely nothing of any other part of it. In the professions specialists are possessed of all the learning in their professions; in industry the specialists are bereft and denied the opportunity of learning the commonest elementary rudiments of industry other than the same infinitesimal part performed by them perhaps thousands of times over each day.

Our movement in advocating industrial education protests most emphatically against the elimination from our public-school system of any line of learning now taught. Education, technically or industrially, must be supplementary to and in connection with our modern school system. That for which our movement stands will tend to make better workers of our future citizens, better citizens of our future workers.

Executive Council's Report.

During the second day of the Toronto convention the executive council in its report made reference to industrial education and its action in relation to the resolution adopted by the Denver convention, and reported as follows:

In accordance with the resolution adopted by the Denver convention, which comprehended the appointment of a special committee on industrial education, we beg to submit the following report:

A special committee on industrial education was appointed to consider the subject matter therein contained. The resolution creating the special commission reads as follows:

"That the president, in conjunction with the executive council of the American Federation of Labor be, and is hereby, authorized to appoint a special committee of at least 15, to be composed of a majority of trade unions members of this convention, who will serve without compensation and incur no expenses other than necessary and legitimate expenditure within the judgment of the president and executive council, to investigate the methods and means of industrial education in this country and abroad, and to report its findings, conclusions, and recommendations to the next annual meeting of the American Federation of Labor."

In accordance with its provisions there were appointed as members of the committee the following:

John Mitchell, chairman; headquarters, Civic Federation, 10096 Metropolitan Building, New York City.

John Golden, president Textile Workers, box 742, Fall River, Mass.

James Wilson, president Pattern Makers' League, 403 Neave Building, Cincinnati, Ohio.

Miss Agnes Nestor, secretary Glove Workers' International Union, room 506, Bush Temple of Music, Chicago, Ill.

Mrs. Raymond Robins, National Woman's Trade Union League, 372 West Ohio Street, Chicago, Ill.

John B. Lennon, Bloomington, Ill.

Charles P. Neill, Commissioner Bureau of Labor, Washington, D. C.

W. B. Wilson, Congressman, House of Representatives, Washington, D. C.

Frank Duffy, Brotherhood of Carpenters, box 187, Indianapolis, Ind.

Hugh Frayne, Sheet Metal Workers, 1711 Summit Avenue, Scranton, Pa.

James O'Connell, machinist, executive board, care room 405, McGill Building, Washington, D. C.

Charles H. Winslow, Massachusetts Commission of Industrial Education, Arlington, Mass.

Edward Hirsch, editor, North and Baltimore Streets, Baltimore, Md.

James Roach, iron molder, Albany, N. Y.

Rev. Charles Stelzle, department church and labor, room 700, 156 Fifth Avenue, New York City.

Stuart Reid, general organizer American Federation of Labor, Lynn, Mass.

By unanimous request at its first meeting, Samuel Gompers, president of the American Federation of Labor, Washington, D. C.; James Duncan, first vice president of the American Federation of Labor, Quincy, Mass.; and Frank Morrison, secretary of the American Federation of Labor, Washington, D. C., were elected to serve as members of the committee.

The initial meeting of the committee was held in New York on August 21, and continued during the following day. The two days' sessions served for the purpose of considering and deciding upon the policy to be pursued. At these meetings information was received by the various members, from its chairman and others, who were requested to appear before them, and with the information imparted, together with an exchange of views, considerable progress was made.

The second meeting was held in Washington, D. C., October 22–23. The committee early realized the necessity of going directly to those for information who had made a study of the subject, and with this point in view extended invitations to some of the foremost educators, business men, and publicists, as well as others, to appear before them, and as a result much valuable information was placed at the disposal of the committee. The following is a list of the persons invited to appear before the committee:

W. B. Prescott, International Typographical Union, commission on supplemental trade education.

Charles R. Richards, originator of the National Society for the Promotion of Industrial Education.

Leslie W. Miller, principal, Pennsylvania Museum and School of Arts.

Dr. Herman Schneider, dean of the University of Cincinnati.

John M. Shrigley, president Williamson Free School for Mechanical Trades.

A. Lincoln Filene, of William Filene's Sons Co., Boston, Mass.

Paul H. Hanus, professor of education, Harvard University.

Frederick P. Fish, president Massachusetts State Board of Education.

Dr. Andrew S. Draper, commission of education of the State of New York.

Arthur D. Dean, chief division of trade schools, New York Education Department.

C. W. Cross, superintendent of apprentices, New York Central lines.

Miss Ella M. Haas, district inspector, Department of Inspection of Workshops and Factories of the State of Ohio.

Charles R. Towson, secretary, industrial department, the international committee of Young Men's Christian Associations.

J. C. Monaghan, secretary National Society for the Promotion of Industrial Education.

Frank A. Vanderlip, president National City Bank, of New York.

Dr. Alexander C. Humphreys, president Stevens Institute of Technology.

Mr. V. Everitt Macy, of New York.

Dr. Henry S. Pritchett, president of the Carnegie Foundation.

Dr. Elmer E. Brown, chief Bureau of Education, Department of the Interior.

Mr. C. W. Burket, editor American Agriculturist.

T. J. Foster, International Correspondence School, Scranton, or representative.

Raymond Robins, Chicago.

The net results of this meeting clearly indicated that our committee was pursuing a practical policy in its investigations, and that much valuable data and information were obtained. That there was much confusion in the public mind

concerning industrial education was manifest. The committee conceived it imperative that honest differences of opinion be considered and pointed out and that an effort be made to help solve this great problem.

Organized labor favors that plan of industrial training that will give our boys and girls such a training as will help them to advance after they are in the industry.

Organized labor believes that there are pressing educational needs which can be at least partially solved by the introduction of industrial training; it is aware that boys and girls do not always have the opportunity to enter the field of employment which will best contribute to their development, either physically, morally, or intellectually. Those who leave school change from one unskilled occupation to another, and gain but little or nothing in efficiency. Labor believes that industrial education between the ages of 14 and 16 years ought to awaken in these children a new school interest, and so help retain them in school longer and contribute more to their development; it believes that if such industrial training took the children between the ages of 14 and 16, when they are of little value in a business way, at a time when the education they have received is of advantage so far as it goes, but hardly fits them for actual working places, that it would serve to give them the proper training to prepare and enter some branch of actual vocational work.

We believe that as much attention should be given to the proper education of those who are at work in our industries as is now given to those who prepare to enter professional and managerial careers, simply to balance justice and make it necessary to give to the wage-earning classes and the common industries such equivalent as we can for what the present schools are doing for the wealthier classes, as well as for the professional and managing vocations.

The personal observations and first-hand information obtained here and in European countries which embrace the general plan of industrial education in the various countries; details of schools at present in operation, both as regards the courses of study and the administration and financing; the views of some of the foremost authorities in industrial education, and the attitude of both employer and organized labor toward the instruction provided by numerous schools operated by means of State, local, and municipal subsidies, and by private funds, have all been collated.

That the impressions made by our individual and joint study were profound is not saying too much, and the magnitude of the problem did not lessen. In considering the subject of the present status of industrial education it seems necessary to emphasize the need of a thorough and intense study of the future effect on American industries and the efficiency of the American workers and the full realization of their prosperity, and it is deemed expedient that this question be given the broadest and fullest consideration and discussion by this convention.

The report of the special committee on industrial education will be submitted to you in printed form. As that report itself shows, it is not sufficiently exhaustive, thorough, and comprehensive to warrant final action; yet it is confidently believed that it is an accurate statement of fact and the best that could be ascertained and presented within so brief a time as the committee had at its disposal.

We recommend that the committee be continued for at least another year; that they cooperate with the executive council and all other bodies having for their purpose extending public industrial education.

Report of Special Committee on Industrial Education.

Delegate Mitchell, chairman of the committee, read the following report:

The special committee appointed by authority of the Denver convention of the American Federation of Labor to consider, investigate, and inquire into the question of industrial education at home and abroad and report in detail to the Toronto convention of the American Federation of Labor in 1909, together with whatever recommendation, suggestions, instructions, and requests it considered necessary in order to place this all-important and vital matter clearly, broadly, and intelligently before the wageworkers of the country and the public in general, begs leave to report that the committee held three meetings during the year, as follows:

The first in New York City, August 20 and 21; the second in Washington, D. C., October 22 and 23; and the third in Toronto, Canada, November 9. Much information and data bearing on the subject matter of industrial education in all its phases was received and very thoroughly discussed, debated, and con-

sidered. The committee found the question of education, whether cultural, industrial, academic, or otherwise, so intensely interesting and vitally important that we have arrived at the conclusion that to report in full to this convention would not be advisable, owing to the fact that our investigations have not been completed and that we are yet awaiting information asked for from some of the most prominent business men of America as well as from educators and others whom the committee thought might be able to give valuable data gathered from actual experience.

REQUIREMENTS OF THE RESOLUTION.

From the terms of the resolution under which the committee was constituted, it is evident that what was desired was:

First. A thorough investigation of the needs of industrial education;

Second. A statement of the extent to which needs are met by existing institutions; and

Third. As a result of such investigation, some definite suggestions for the promotion of industrial education in such manner as might best serve the interests of the whole people.

The committee has entered on its duties without fixed notions as to the form which industrial education should take throughout the country, and its investigations so far have made a profound impression upon its members.

DEMAND FOR INDUSTRIAL EDUCATION.

The importance of our subject can not be too highly estimated. The general demand for industrial knowledge and skill and the almost universal interest in the subject manifested by business organizations, boards of trade, labor organizations, as well as by educators and public men, is sufficient proof that the right kind of education for a boy or girl who expects to enter upon a vocational career is second only in importance to their having an education at all.

We must never lose sight of the fact that a large majority of the working people are poor, and because of this they are forced to begin the battle of life at an early age. The need of the day is that something be done for the children of this great wageworking class.

Formerly the apprenticeship system offered the boy an opportunity to learn a trade and become a thoroughly trained mechanic, but of late years the scheme of specialization has supplanted the old apprenticeship system, even to extreme specialization. It ought to be recognized as a scientific truth that the higher the skill possessed by the mechanic the more valuable is his labor, both to himself, his employer, and the community. The more efficient labor becomes the higher wages it should command.

The one trouble in America to-day is that too many of our youths who have graduated from the grammar or high school are misfits industrially. If we are to secure industrial supremacy, or even maintain our present standards in the industrial world, we must in some way in our educational system acquire an equivalent to our old apprenticeship system.

APPRENTICESHIP SYSTEM.

It is of more than passing interest to note that a revival of apprenticeships by large corporate interests through comprehensive and sane regulations are gradually taking form.

With the growing feeling that the old-time apprenticeship system must be modified to meet modern conditions of life there looms up the question of a substitute which shall keep the best and most necessary of the older customs and meet modern requirements.

It is generally conceded by those interested in industrial education that the industrial school, per se, does not and can not result in turning out a full-fledged, skilled mechanic ready to take up his trade.

It is further recognized that the old apprenticeship system possessed many features that were uneconomic and unjust, but with the preservation of much that was good and its application by proper blending with the modern idea of perfection in theory it would lead to more satisfactory results.

A marked tendency toward apprenticeships is taking place, and the feeling expressed by both employer and employed is that a gradual return will take place if such training is conducted sanely and advantageously to the American youth.

In order to bring out practical suggestions toward a solution of the problem the committee addressed themselves to the following questions:

1. Should trade, vocational, technical, and industrial schools be established as a part of the public-school system?
2. Should private industrial educational institutions be tolerated?
3. Under what conditions and terms should industrial schools, either public or private, be countenanced and supported?
4. Under what conditions should semiprivate or semipublic industrial schools, namely, the so-called "cooperative industrial schools" be approved or disapproved?
5. Should they be free, supported by the city, county, or State in which they are located?
6. Should they be under the control or partial control of the National Government?
7. And should their instructors or teachers be practical men from the ranks of trade occupations, or should they be men who know nothing of the trade itself except its theoretical side?
8. What should be taught under the head of "Industrial education"—the cultural side, the professional side, the mechanical side, the business side, or all combined?
9. To what extent, if any, should labor headquarters, labor temples, and labor halls be used to favor industrial education?

Believing that progress could best be promoted by a close study of the prevailing systems now in vogue and that some way should be provided so that the maximum of information should be obtained at the minimum cost of time and expense, the committee decided that invitations should be extended to a group of the foremost exponents of industrial education to meet with them in Washington October 23 and 24 for the purpose of conferring and explaining the merits of the several types of industrial education, and accordingly the following persons were extended invitations:

W. B. Prescott, International Typographical Union commission on supplemental education.

Charles R. Richards, originator of the National Society for the Promotion of Industrial Education.

Leslie W. Miller, principal Pennsylvania Museum and School of Arts.

Dr. Herman Schneider, dean of the University of Cincinnati.

John M. Shrigley, president Williamson Free School for Mechanical Trades.

A. Lincoln Filene, of William Filene's Sons Co., Boston.

Paul H. Hanus, professor of education, Harvard University.

Frederick P. Fish, chairman Massachusetts State Board of Education.

Dr. Andrew S. Draper, commissioner of education of the State of New York.

Arthur D. Dean, chief division of trade schools, New York educational department.

C. W. Cross, superintendent of apprentices, New York Central Lines.

Miss Ella M. Haas, district inspector, department of inspection of workshops and factories of the State of Ohio.

Charles R. Towson, secretary Industrial Department of the International Committee of the Young Men's Christian Associations.

J. C. Monaghan, secretary National Society for the Promotion of Industrial Education.

Frank A. Vanderlip, president National City Bank, of New York.

Dr. Alexander C. Humphreys, president Stevens Institute of Technology.

Mr. V. Everitt Macy, of New York.

Dr. Henry S. Pritchett, president of the Carnegie Foundation.

Dr. Elmer E. Brown, Chief, Bureau of Education, Department of the Interior.

Mr. C. W. Burket, editor American Agriculturist.

Mr. T. J. Foster, International Correspondence School, Scranton, or representative.

Mr. Raymond Robins, Chicago, Ill.

Naturally the result of this meeting, which occupied the greater portion of two days, with one evening session, was illuminating and instructive, and served to show the keen interest and alertness of labor representatives.

The object of the several systems of education was kept steadily in view throughout the entire conference, and the description of the leading types, showing their aims, objects, and methods of instruction, made a profound impression upon the members of the committee.

There was a remarkable unanimity of opinion on important points in regard to industrial education and the numerous demands for technical training for those who have completed a compulsory school attendance period and who desire to take up an industrial vocation at a later time.

It also served to show that the much-heralded apathy and disinterestedness charged by our critics to the trades unions is more imaginary than real, and that organized labor was fairly abreast of the situation.

To the ladies and gentlemen who, at the sacrifice of valuable time from their business, cooperated with the committee in its investigations the committee feels deeply grateful and appreciates the gratuitous services rendered in the abundant information and assistance given, and sympathizes with the universal thought expressed that the conference marked another epoch in the history of the trades union movement for industrial education.

Subsequent discussion seemed to indicate that the champions of one system as against another might learn much from the different viewpoints, and that there was common ground for all on which to base the future development of a sound system of industrial education, free from the dangers which trade unions' representatives pointed out.

PUBLIC V. PRIVATE CONTROL OF PUBLIC INSTRUCTION.

The committee feels that there is justification in condemning any system of public instruction privately controlled, or any scheme of private selection of pupils, and calls attention to the introduction of a plan which is being put into operation in several localities and fostered by manufacturers' associations.

"THE COOPERATIVE INDUSTRIAL EDUCATION PLAN."

It is a limited plan for industrial education, carried on between the high school, which engages a teacher for the purpose, one satisfactory to the manufacturers, and a group of the latter who indenture such boys as they desire to have. The idea is, of course, to give a thorough training. But,

(*a*) The manufacturer is not obliged to take any boys or to keep any boy.

On the other hand, the high school is obliged to educate all duly qualified boys; to give them all that the city provides.

Therefore, those who study in the cooperative course do so on sufferance.

(*b*) The people have no hand in this plan. No matter how much a father may desire such training for the boy, the city is helpless to do anything, as under this plan the veto power over the boy's right to public industrial education is in the hands of the manufacturer.

(*c*) The public school must be neutral as to trade unionism. Surely it dare not be hostile. But what is there to restrain one or all the cooperating plants from assuming any attitude, however hostile? They have the right to teach and to foster antiunionism with school-apprenticed boys under them.

(*d*) A boy who should talk over or agitate for union principles can be instantly deprived of his educational future under this plan; and if his father should be a known union champion only the good nature of the manufacturer can prevent reprisal in the form of dropping the boy from this course.

(*e*) The teacher can not help siding with the manufacturers; he can not protest, should he so wish, if they import scabs, strike breakers, or any sworn foes of unions. It is not for the school to say who shall be the fellow workmen of these young student apprentices. If he be a man of principles, he could not take the boys out of such a shop, for they are under bond.

(*f*) Finally, with a teacher too soft on the side of the manufacturers, we shall see for the first time in a public-school system a spirit new in evil power—a class of schoolboys trained under a thoroughly un-American system of private selection of pupils, based on no public or competitive method unless the manufacturers so permit;

A system wholly removed from the salutary supervision of the people.

A system which needs no check in prejudicing the favorities of this system against the large excluded class of their schoolfellows and, later, against their fellow workmen themselves.

Any scheme of education which depends for its carrying out on a private group, subject to no public control, leaves unsolved the fundamental democratic problem of giving the boys of the country an equal opportunity and the citizens the power to criticize and reform their educational machinery.

The trend toward the introduction of schemes of industrial education and apprenticeships at public as well as at private expense, which pretends to teach trades in periods ranging from four months to four years and turn out graduates in times of industrial peace who are able to earn only 50 per cent of the established wage in a given trade and in times of industrial dispute are exploited in the interests of unfair employers is worthy only of condemnation.

LEGISLATION.

Results vast in importance and magnitude have come from the action of Congress in 1862 giving land grants to each State to be used for a State college of agriculture and mechanic arts. This appropriation of lands, followed by direct appropriation of money in 1890 and 1907, provides these colleges with a fund averaging about $65,000 per State, or a total of over $3,000,000 annually. While this fund was for a long time used largely for general studies, the subjects of mechanical arts, agriculture, and home economics were finally developed, so that they now compete on nearly equal terms with the literary and scientific courses. Since most of this fund is in demand to train engineers, technical agriculturists, and teachers in the mechanical, agricultural, and home economic subjects, comparatively little is available to give school training to those who wish to become expert workmen, farmers, or home makers.

The title of the land-grant act of 1862 provided for "colleges for the benefit of agriculture and the mechanic arts." Each State was required to "inviolably" appropriate the accruing interest and earnings from this gift to the "endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical subjects, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts in such sequence as the legislatures of States may respectively prescribe in order to promote the liberal and practical education of industrial classes in the several pursuits and professions of life."

Though the law was plainly designed for the betterment of that 90 per cent who are in vocations where the labor is done with the hands, these schools, as most other schools, too often were conducted mainly to assist those who were seeking an avenue out of the manual side of the mechanical trades, agriculture, and home making into the so-called professions. The research departments connected with these colleges and with other scientific and engineering schools and departments have now accumulated a vast body of knowledge useful to the workman. Much of this information has been arranged in textbooks and in courses for practical work in the school shops, in the commercial shops, on the farms, or in the home.

Gratified with the developments of the State colleges of agriculture and mechanic arts, Congress has been ever ready to meet requests to further build up these institutions. And there is a movement, with a large following in Congress, to still further develop the education to which these colleges were dedicated. Since only one college in a State can do little more for our greatly enlarged population than to provide courses of study for those who are to become technicians, and can not give equal opportunity in liberal and practical education to all of the industrial classes, this new movement has crystallized around a plan for including the secondary public schools along with the State colleges of agriculture and mechanic arts, thus creating and giving direction to a complete national scheme of education in which labor shall receive recognition and its just share of attention.

ORGANIZED LABOR'S POSITION.

Organized labor's position regarding the injustices of narrow and prescribed training in selected trades, by both private and public instruction, and the flooding of the labor market with half-trained mechanics for the purposes of exploitation, is perfectly tenable, and the well-founded belief in the viciousness of such practices, and consequent condemnation, is well-nigh unassailable.

Organized labor's record for years in regard to better sanitary conditions in factories and workshops, and its continued efforts toward safeguarding women and minors, have been the subject of wide discussion and much helpful legislation.

Its advocacy of free schools, free textbooks, and the raising of compulsory school age has been religiously adhered to, and closely allied to these subjects is that of industrial education, and any serious discussion of the proper kind of vocational training promotes discussion of the former.

There is a strong reaction coming in general methods of education, and that growing feeling, which is gaining rapidly in strength, that the human element must be recognized, and can not be so disregarded as to make the future workers mere automatic machines.

Experience has shown that manual-training school-teachers without actual trade experience do not and can not successfully solve this great problem, and that progress will necessarily be slow, as new teachers must be provided, a new set of textbooks will have to be written, and the subjects taught in a sympathetic and systematic manner.

In the last analysis, it is of greater moment to those engaged in industry whether this question should be discussed freely and fairly than it is to mere theorists, who advocate industrial education without having any definite plan or purpose (other than a selfish one), in their advocacy of the same, and it is believed that a unification rather than a multiplication of effort is needed in order to help solve this immense problem.

CONCLUSIONS.

It is believed that the future welfare of America largely depends on the industrial training of our workers and in protecting them.

The inquiries of the committee seem to indicate that if the American workman is to maintain the high standard of efficiency, the boys and girls of the country must have an opportunity to acquire educated hands and brains, such as may enable them to earn a living in a self-selected vocation and acquire an intelligent understanding of the duties of good citizenship.

No better investment can be made by taxpayers than to give every youth an opportunity to secure such an education. Such an opportunity is not now within the reach of the great majority of the children of the wageworkers. The present system is inadequate and unsatisfactory. Only a small fraction of the children who enter the lower grades continue through the grades until they complete the high-school course. The reasons which seem to be the prime causes for withdrawal are, first, a lack of interest on the part of the pupils; and secondly, on the part of the parents, and a dissatisfaction that the schools do not offer instruction of a more practical character. The pupils become tired of the work they have in hand and see nothing more inviting in the grades ahead. They are conscious of powers, passions, and tastes which the school does not recognize. They long to grasp things with their own hands and test the strength of materials and the magnitude of forces.

Owing to past methods and influences, false views and absurd notions possess the minds of too many of our youths, which cause them to shun work at the trades and to seek the office or store as much more genteel and fitting. This silly notion has been shaken by the healthy influence of unions, and will be entirely eradicated if industrial training becomes a part of our school system, and in consequence of this system of training he will advance greatly in general intelligence, as well as in technical skill, and in mental and moral worth, he will be a better citizen and a better man, and will be more valuable to society and to the country.

RECOMMENDATIONS.

Supplemental technical education.—The importance of this kind of school, for those who have already entered the trades, has been a matter for serious consideration by the committee.

The demand for such instruction is measured by the necessity for training in particular trades and industries, and the chief aim of such instruction should be to present those principles of arts and sciences which bear upon the trades and industries, either directly or indirectly.

The economic need and value of technical training is not to be disregarded, and cognizance should be taken of the fact that throughout the civilized world evening and part-time day technical schools enroll 20 pupils to every 1 who attends the other types of vocational schools.

The committee submits for consideration and discussion to the convention the proposition that there be established, at public expense, technical schools for the purpose of giving supplemental education to those who have entered the trades as apprentices.

We further recommend—

1. The continuance of progressive development of supplemental trade education, as inaugurated by trade-unions, and call special attention to the work undertaken by the International Typographical Union in the establishment of a school for the higher education of its members.

It is a practical application to a trade-union of a necessity that exists, and admitted.

It is administered by printer-tutors who have never been afflicted with pedagogical cramp, and never expect to be; is within the reach of every man within the industry, and has succeeded in developing the latent talents and of widening the sphere of usefulness among its students, and ought to appeal to every ambitious printer.

A significant fact in connection with this school is that educators, as well as others of wide experience, believe that, for the adaptation to an end, this school has no equal. It also marks a new era in education, and one of its chief assets, other than the education of its students, is that public and private interests are emulating its example.

While other trade-unions are engaged in activities of a like nature, though expressed in various forms, for the sake of brevity elaborate descriptions are omitted.

It is worthy of mention, however, that large sums of money are annually expended by trade-unions for education, through the channels of official journals, and in some instances its members are being trained for the teaching profession, while the preparation of textbooks is another undertaking to be commended.

The committee further recommends that all trade-unions which have not adopted a system of technical education give the matter the consideration it so richly deserves; and we further believe that the present undertakings of the unions call for the most enthusiastic admiration, and are entitled to the most cordial and loyal support.

Following is a list of organizations which have undertaken an extension of education for their members:

International Typographical Union, Electrotypers and Stereotypers, International Photo-Engravers of North America, Printing Pressmen and Assistants' Union, International Granite Cutters, International Horseshoers' Union, Pattern Makers' League of North America, and the Carpenters of Chicago and Cook County.

2. *Technical industrial education.*—We favor the establishment of schools in connection with the public-school system, at which pupils between the ages of 14 and 16 may be taught the principles of the trades, not necessarily in separate buildings, but in separate schools adapted to this particular education, and by competent and trained teachers.

The course of instruction in such a school should be English, mathematics, physics, chemistry, elementary mechanics, and drawing.[1] The shop instruction for particular trades, and for each trade represented, the drawing, mathematics, mechanics, physical and biological science applicable to the trade, the history of that trade, and a sound system of economics, including and emphasizing the philosophy of collective bargaining. This will serve to prepare the pupil for more advanced subjects, and in addition to disclose his capacity for a specific vocation.

In order to keep such schools in close touch with the trades there should be local advisory boards, including representatives of the industries, employers, and organized labor.

3. The committee recommends that any technical education of the workers in trade and industry being a public necessity, it should not be a private but a public function, conducted by the public and the expense involved at public cost.

4. We recommend the continuance of the life of the committee and final report to the 1910 convention.

5. That the convention requests the United States Department of Commerce and Labor to investigate the entire subject of industrial education in this country and abroad.

6. To request the committee to cooperate with the Department of Commerce and Labor in said investigation.

7. To request the executive council of the American Federation of Labor to act with said committee ex officio.

8. To request the officers of all organizations affiliated with the American Federation of Labor to supply us with all information they may have relative to industrial education as soon as possible, for the purpose of getting an up-to-date report with up-to-date methods of how industrial education should be taught, conducted, and promoted.

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[1] See Definitions.

Appended to this report is a brief prepared for the use of the committee, which purposes to show, with reasonable brevity just what is being done, and what has been begun in the recent past in regard to industrial education, including the problem; what has been done in foreign countries, methods of accomplishment in this country, showing systems and types of systems; that which is being accomplished by philanthropy and private interests; also that which is being done by the Federal Government, together with the State laws on the subject, and the attitude of employers and organized labor.

JOHN MITCHELL, *Chairman.*
SAMUEL GOMPERS.
JAMES DUNCAN.
JOHN B. LENNON.
DR. CHARLES P. NEILL.
EDWARD HIRSH.
FRANK MORRISON.
JAMES WILSON.
Hon. W. B. WILSON.
Hon. CHARLES STELZLE.
HUGH FRAYNE.
FRANK DUFFY.
JOHK GOLDEN.
MARGARET DREIER ROBINS.
AGNES NESTOR.
JAMES ROACH.
JAS. O'CONNELL.
STUART REID.
CHARLES H. WINSLOW.

President Gompers announced that the report of the special committee would be referred to the committee on education.

President Gompers's report, the executive council's report, and the special committee's report on industrial education was referred to the committee on education.

REPORT OF COMMITTEE ON EDUCATION.

Delegate Savage, secretary of the committee, read the following report:

To the officers and delegates of the Twenty-ninth Annual Convention of the American Federation of Labor:

We, your committee on education, beg leave to report as follows:

First. We have carefully examined the report of the special committee appointed by authority of the Denver convention on industrial education. We heartily indorse the action of this committee and fully concur in all the recommendations contained in the report, and congratulate the committee on the clear and concise manner in which they have covered the many matters that enter into a question of so much importance to the working people and the public in general as the question of industrial education is at this time.

We especially recommend that this committee be continued, as suggested in the report, to make a final report to the 1910 convention. We also recommend legislation along the lines indicated in the report.

We also deem it advisable, on account of the great importance of the question, that delegates, in reporting to their constituents the work of this convention, make special mention of this matter, and that the secretary of American Federation of Labor be instructed to have a sufficient number of copies of this report printed to be distributed among the organizations affiliated with the American Federation of Labor, upon application.

JOS. F. VALENTINE, *Chairman.*
G. W. SAVAGE, *Secretary.*
VICTOR A. OLANDER.
EDWARD B. GOLTRA.
JAS. J. FREEL.
WM. J. TRACY.
P. F. RICHARDSON.
Miss SADIE SPRAGGON.
JNO. T. BUTLER.
ERNEST BOHM.
SAMUEL BOTTERILL.
HUGO MILLER.
FRANK BUTTERWORTH.
THOS. P. MENTON.
C. W. FEAR.

On motion, the report of the committee was adopted as read.

DEFINITIONS AND EXPLANATIONS.

AN OUTLINE FOR A TENTATIVE COURSE OF STUDIES IN A SPECIFIC GROUP OF TRADES.

Definitions.

Science is classified knowledge.

All our knowledge concerning changes which result in the alteration of appearance, position, or state of bodies is classified under the head Physics.

Illustration—1. The pulverizing of plate glass shows change in appearance; so also does wheat ground into flour. 2. Water may be ice, water, or steam, thus showing change of state or form.

All our knowledge concerning changes which result in the formation of new substances is classified under the head Chemistry.

Illustration.—The burning of kerosene oil, illuminating gas, or wood gives new substances.

Physics and chemistry treat of the laws of matter and energy.

Physics is the science of mechanics, heat, sound, light, magnetism, and electricity.

Chemistry treats of matter and energy in their simplest forms, and the various combinations of these simplest forms.

It is essential at the beginning of a course in the study of science underlying the trades to understand accurately the meaning of the words fact, law, theory, and hypothesis.

Summary.

Facts are discovered by direct observations and experiments.
Laws are statements of facts.
Theories are statements of supposed causes of facts.
Hypotheses are guesses concerning the cause of some fact or set of facts.

SPECIFIC APPLICATION OF TERMS USED IN THE REPORT OF SPECIAL COMMITTEE.

English.—The instruction in English should be such as will give the pupil a taste for good reading and to acquaint him with and to make intelligent use of the literature which will be helpful to him as a citizen and an industrial worker. It should prepare him to state in direct and clear language the necessities and problems which arise in his social, civic, and industrial life. It should prepare him to understand clearly and to make comprehensible statements embracing the technicalities of his industrial work.

Mathematics.—The instruction in mathematics should cover those fundamental principles of mathematics which underlie the practical calculations of the civic, economic, and industrial life of the worker. Problems and illustrations applying these principles should be drawn from practical life.

Physics.—The instruction in physics should embrace the basic principles of natural philosophy, with illustrations drawn from familiar surroundings.

Chemistry.—The instruction in chemistry should be such as will make the pupil familiar with the more common chemical elements and chemical changes.

Mechanics.—The instruction in mechanics should embrace the general mechanical principles involved in the action of forces as applied almost universally daily in practical life.

Drawing.—The instruction in drawing should embrace both free-hand and mechanical drawing. In free-hand drawing the pupils should be taught to make outline sketches of simple objects which shall show the general appearance of the objects as regards form and shape and the approximate relative dimensions, so that when the dimensions by measurement are given a lucid finished drawing can be made by means of the sketch. The instruction in mechanical drawing should embrace the use of drawing instruments and accessories, and the preparation of fairly creditable finished drawings on the basis of the sketches and measurements made by the pupil. Practice in the reading of drawings and blue prints should form an important part of this instruction.

Shop instruction.—Instruction should be given in shop practice for specific trades. In connection with this instruction should be given the following subjects pertaining to these trades: Drawing and design to the extent of making appropriae and lucid sketches and a reading of finished drawings and specifications. Mathematics as used in the actual shop practice, both by journeyman worker and foreman. The mechanical principles involved in the tools, apparatus, and appliance and the operations of the trade; science which shall explain and account for materials and changes due to the operations of the trade.

Civics and history.—The history of trades in general and of the development of particular trades. Civics and history necessary for the development and promotion of good citizenship. The elements of the subjects of civics and economics as applied to the industrial and commercial phases of the history of the United States.

Economics.—Economics which shall develop well-informed and thinking individuals regarding the broader economic questions and those arising in specific trades. This should include the philosophy of collective bargaining and the relations of the employers and the employed to industry; trade bookkeeping, including stock taking and prices.

The rights of labor to organize.
The right of workmen in association to set the scale for the sale of their labor power in a joint bargain with employers.
The rights of contractural relations between employer and employed.
Emphasis of value of minimum rate of wages.
Value of analysis of statistics as applied to economics.
Value of organization; in production, in distribution, in the dissemination of economic truths, and in all other progressive efforts.
A comprehensive study of the main factors in the production of wealth, i. e., land, labor, capital.
Arbitration voluntarily entered into and voluntarily enforced as against compulsory arbitration, compulsorily entered into, and compulsorily enforced.

TENTATIVE SUGGESTIONS FOR PRACTICAL INSTRUCTION IN SPECIFIC TRADES, INCLUDING CARPENTRY, PATTERN MAKING, WOODWORKING, AND MACHINE-SHOP PRACTICE.

Carpentry.

Practical.—Names, use, and handling of various tools, and their care, as they are required for use (this includes the bench, planes, chisels, various styles of saws, bits, gouges, etc.); names and knowledge of the various kinds of wood and other materials used; smoothing, planing dressing, straightening, sighting, and cutting of boards and other pieces of wood, according to dimensions or patterns furnished. Whittling of pegs, cutting out with saw and chisel polygons and other ornamental designs based on geometrical drawings; taking apart, putting together, grinding, and sharpening tools; simple joining with tenons and mortises, forked joints, dove-tailed joints, miter joints and angle, butt and notched joints, sketching and making of objects of simple construction, with tenons, pins, tongues, mortise, dove-tailed, and square joints, such as plain tables, desks, benches, sawhorses, ladders, stepladders, shelves with brackets, various kinds of boxes.

Technical.—Study of construction; the use and care of the tools which are used; study of qualities and nature of wood and other materials, taken up as they come into use.

Carpentry drawing.—Drawings of the various orders of architecture, from the point of view of their application to the trade, and for the development of sense of proportion. Study and drawing of complete objects, as inside doors with complicated frames, street doors, storm doors, sliding doors, various styles of paneling, and staircases, with details carried out on a full scale. Study of roof framing, pitch, form, and material to be used.

METAL WORK AND MACHINE SHOP PRACTICE, INCLUDING PATTERN MAKING.

Construction of simple articles involving practice in filing, fitting, drilling, and forging, together with free-hand sketches and working drawings.
Construction of articles involving the above, and also soldering and the use of the shaping machine.
The nature, use and physical properties of cast iron, wrought iron, steel and brass. The general construction of the drilling machine, punching and shearing machine and the shaping machine.
Construction of gauges and more difficult articles involving more accurate work, and including fitting, forging, turning, screw cutting, and shaping, with sketches and working drawings of the same; the construction of the lathe and other machines; the manufacture of iron and steel.
Making sketches and working drawings for the construction of a complete tool or scientific apparatus involving fitting, forging, turning, screw cutting, shaping, and milling.
Cutting speeds; speed of machines; accessories; methods of driving, etc.

Pattern making.

Sharpening tools; joinery; small patterns; patterns of simple parts of machines. Machine tools; gears; patterns and molding flasks; shrinkage and strength of materials.

Mechanics.—The most important kinds of motion; the fundamental law of inertia and of reciprocal action; conception and effect of a force; the fundamental law of acceleration; mass; power of work of moving bodies; the funda-

mental law of the independence of motions; composition and resolution of force: forces in one plane, with different points of application; static momentum; couples.

Technical.—Study of iron ores; the foreign elements in iron, and their effect on it; production of pig iron (management and products of the blast furnace); the iron, steel, and brass foundry; production of malleable casting; production of wrought iron and steel (finery process, puddling process, Bessemer process, Siemens-Martin process); the forms of the kinds of iron found in commerce; sheet metal; other metals—copper, lead, tin, zinc, aluminum; alloys—brass, bronze (aluminum alloys).

Drawing.—Construction of the parts of machines; construction of teeth for spur gears and bevel gears; construction of hubs and spokes, couplings, bearings, etc.; making workshop drawings for models, component parts of lathes, milling machines, and grinding machines; continuation of sketching exercises.

LABOR'S BILL FOR CONGRESSIONAL ENACTMENT.

A BILL To cooperate with the States in encouraging instruction in agriculture, the trades and industries and home economies in secondary schools; in preparing teachers for those vocational subjects in State normal schools; and to appropriate money therefor and to regulate its expenditure.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That commencing with the fiscal year beginning July 1, 1913, there shall be appropriated, out of any money in the Treasury not otherwise appropriated, to be paid as hereinafter provided to the respective States and Territories and to the District of Columbia for the maintenance of instruction in agriculture and home economics in State district agricultural schools of secondary grade, as herein provided, the sum of $4,000,000 annually; for the maintenance of branch agricultural experiment stations, to be located at said agricultural secondary schools, to be administered as parts of the respective State experiment stations now established or which may hereafter be established in the respective States and Territories in accordance with the act of Congress approved March 2, 1887, the sum of $1,000.000 annually; for the maintenance of instruction in the trades and industries and home economics and agriculture in public schools of secondary grade the sum of $5,000,000 annually; and that commencing with the fiscal year beginning July 1, 1910, there is hereby appropriated out of any money in the Treasury not otherwise appropriated for the maintenance of instruction in agriculture, in trades, in industries, and in home economics in State and Territorial normal schools, the sum of $1,000,000 annually.

SEC. 2. That the funds appropriated under this act for education in public secondary schools and in State normal schools shall be allotted to the States and Territories and the District of Columbia, in proportion to their population, as shall be determined by the census of 1910, and that the funds for the district agricultural high schools and branch experiment stations shall be apportioned to the respective States and Territories in proportion to the persons engaged in agricultural pursuits, as shall be shown by the census of 1910: *Provided*, That in each State and Territory with less than three hundred thousand inhabitants there is hereby appropriated for normal-school instruction the additional sum of $3,000, and that to each State and Territory with less than 100,000 people engaged in agricultural pursuits there is hereby appropriated for district agricultural high schools the additional sum of $5,000 annually, and for branch experiment station work the additional sum of $2,500 annually.

SEC. 3. That each State and Territory, in order to secure the benefits of this act, shall accept its provisions and shall divide the State or Territory into districts, providing in each district for one secondary agricultural school and a branch experiment station, the total number of such districts in a given State or Territory to be not less than one for each fifteen counties nor more than one for each five counties and fraction of five counties; and shall enact laws providing for the allotment of the funds herein appropriated to the respective schools to which it may choose to allot funds under the provisions of this act, and shall provide for the administration of the use of the respective funds herein appropriated: *Provided*, That in States where separate schools are maintained for the colored race the allotment of money for the encouragement of instruction in the aforesaid vocations shall be divided in each State in proportion to the population of the two races, respectively, and whether the districts for agricultural secondary schools for the two races are conterminous or not

conterminous their total number shall be determined by the number of districts permissible under the provisions of this act: *Provided*, That in case the legislature of any State or Territory has not been in session to comply with the terms of this act, the governor, acting for the State or Territory, may accept the provisions of this act in its relation to State normal schools pending the convening of the legislature.

SEC. 4. That no State or Territory shall be entitled to its allotment for branch experiment station work until its legislature shall, by law, have provided for the establishment of said branch experiment stations and shall have provided for the annual maintenance of such stations at least an equivalent sum to that appropriated annually to the State or Territory under this act; and the sum paid to each State and Territory for branch experiment stations shall be applied only to paying the necessary expenses of conducting, by such branch-experiment stations, experiments bearing directly on the agricultural industry of the United States, having due regard for the varying conditions and needs of the respective States and Territories.

SEC. 5. That the funds appropriated in this act for instruction shall be used only for distinctive studies in agriculture and home economics in agricultural secondary schools in the respective districts provided for in this act and for distinctive instruction in the trades and industries, home economics, and agriculture in separate secondary schools organized for this purpose and in separate units or courses in regular secondary schools and for distinctive normal courses in agriculture, home economics, and the trades and industries in State and Territorial normal schools, and including shorter courses in the respective secondary schools for persons permanently engaged in or experienced in the agricultural, industrial, or home-making vocations, and continuation courses for persons, not necessarily graduated from elementary schools, who need opportunities offered by short and night vocational courses in agriculture, the industries and trades, and home making; and that all States, Territories, and the District of Columbia accepting these funds shall provide other funds with which to pay the cost of providing the necessary lands and buildings and to pay the cost of instruction in such other and general studies as will complete well-rounded courses, the main purposes of which are to give vocational as well as general preparation for agriculture, the trades and industries, and home making suited to the needs of the respective sections and communities of the United States.

SEC. 6. That the sum hereby appropriated to the respective States and Territories and the District of Columbia for the maintenance of instruction in agriculture, trades and industries, and home economics, and for branch agricultural experiment stations shall be annually paid, one-half on the 1st day of July of each year and one-half on the 1st day of January of each year, by the Secretary of the Treasury, upon the requisition of the Secretary of the Interior, out of the Treasury of the United States, to the treasurer or other officer duly appointed by the governing boards or departments of the schools and experiment stations designated by State law to receive the same: *Provided*, That in any State there shall not be more than one State board or department thus designated for the agricultural secondary schools and branch experiment stations, not more than one State board or department for the State normal schools, and not more than one State board or department for public secondary schools.

SEC. 7. That if any portion of the moneys allotted under this act shall by any action or contingency be diminished or lost or misapplied, it shall be replaced by said State, Territory, or the District of Columbia, and until so replaced no subsequent appropriation shall be allotted or paid to such State, Territory, or the District of Columbia: *Provided*, That no portion of said moneys shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, repair, or rental of any building or buildings, nor to the purchase or rental of lands.

SEC. 8. That it shall be the duty of each institution receiving funds under this act annually, or or before the 1st day of February, to make to the governor of the State or Territory or to the Commissioners of the District of Columbia in which it is located a full and detailed report of its operations, including a statement of all receipts and expenditures, a copy of which shall be sent to the Secretary of the Interior, a copy to the Secretary of Agriculture, and a copy to the Secretary of Commerce and Labor; and on or before the 1st day of September in each year to make to the Secretary of the Interior, on blanks provided by him for that purpose, a statement of receipts and expenditures of money under this act during the preceding fiscal year.

SEC. 9. That on or before the 1st day of July in each year after this act becomes operative, the Secretary of the Interior, under cooperation with the Secretary of Agriculture and with the Secretary of Commerce and Labor, shall certify to the Secretary of the Treasury as to each State and Territory and the District of Columbia whether it has complied with the provisions of this act and is entitled to receive its share of the allotments herein provided for schools and experiment stations under this act, and the amounts which it is entitled to receive. If the Secretary of the Interior shall withhold a certificate from any State, Territory, or the District of Columbia for the whole or any part of its allotment, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separately in the Treasury as a special fund until the close of the next Congress in order that the State, Territory, or the District of Columbia may, if it shall so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury, and the Secretary of the Interior, in cooperation with the Secretary of Agriculture and the Secretary of Commerce and Labor, is hereby charged with the proper administration of this law.

SEC. 10. That the Secretary of the Interior, in cooperation with the Secretary of Agriculture and the Secretary of Commerce and Labor, shall annually ascertain whether the schools receiving the benefits of this act are using the funds granted to them in accordance with the terms of this act, and make a report thereon to Congress; and he shall also make an annual report to Congress on the receipts and expenditures and on the work of the institutions to which allotments are made under this act, and also whether the appropriation of any State, Territory, or the District of Columbia has been withheld and, if so, the reasons therefor.

SEC. 11. That there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $20,000 annually, to be expended under the direction of the Secretary of the Interior, in paying the necessary expenses of administering this act, in cooperation with the Secretary of Agriculture, the Secretary of Commerce and Labor, and the respective States, in paying the expenses of cooperating with the respective departments and States in developing the courses of study provided for in this act and in paying the expenses of preparing the reports provided for in this act.

SEC. 12. That there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $20,000 annually, to be expended under the direction of the Secretary of Agriculture, acting in cooperation with the Secretary of the Interior and the respective States, in paying the necessary expenses of the administration of this act with reference to instruction and investigations in agriculture and home economics, as provided for in this act; and the Secretary of Agriculture is hereby authorized to give the schools and branch experiment stations designated in this act such advice and assistance as will best aid them in carrying out the provisions of this act in relation to instruction and research in agriculture and home economics.

SEC. 13. That there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $20,000 annually, to be expended under the Secretary of Commerce and Labor, acting in cooperation with the Secretary of the Interior and the respective States, in paying the necessary expenses of the administration of this act with reference to instruction in the industries and trades, as provided for in this act; and the Secretary of Commerce and Labor is hereby authorized to give the schools designated in this act such advice and assistance as will best aid them in carrying out the provisions of this act in relation to instruction in the industries and trades.

SEC. 14. That this act shall take effect immediately on its passage.

NOTE.—The following pages purpose to show with reasonable brevity just what is being done and what has been begun in the recent past in regard to industrial education, including the problem; what has been done in foreign countries, methods of accomplishment in this country, showing systems and types of systems; that which is being accomplished by philanthropy and private interests; also that which is being done by the Federal Government, together with the State laws on the subject and the attitude of employers and organized labor.

In spite of all possible endeavor to make this presentation as complete as brevity would permit and to include the many experimental efforts, it was found that the time allowed was wholly inadequate for as comprehensive a treatise as desired.

THE PROBLEM.

The problem of industrial education and trade training is made very complex by the present system of specialization, and unless great care is exercised the exploitation of boys who desire to enter upon a career as a skilled craftsman is probable.

A proper apprenticeship system which will guarantee to the youth the opportunity of learning his trade as a whole is very much desired.

One of the disadvantages of many apprenticeship systems is that establishments have become so large and with so many departments with their divisions and subdivisions and processes that the time of the boy is fully employed in mastering details of one department to the exclusion of all other departments. Public industrial schools or schools for trade training should never become so narrow in their scope as to prevent an all-around shop training.

The action of the National Tool Builders' Association in boldly stating that they expect to train specialists will do more to call to the attention of the public the necessity for broad industrial training before the age of 17 than any other procedure, hence a vital question to be considered is how best to provide for the future entrance into skilled trades without overcrowding them, and finally the problem is of so training the workers that they become the best kind of workers the world produces and at the same time develop conditions which go with increased efficiency—increasing wages and increasingly better living conditions.

We must face the question as it stands, and as the Massachusetts Commission on Industrial Education has well said:

"The progressive development of all high-grade industries requires skilled workmen, possessing 'industrial intelligence'—that is, comprehensive insight into and intelligent interest in their several trades, as well as skill. The present conditions of production are usually unfavorable to the training of such workmen in the shop or factory, and sometimes render such training impossible. All industries, whatever their grade, need more men than are now obtainable, who are capable of acting as foremen, superintendents, or managers—men possessing the comprehensive insight, interest, and skill necessary for the organization and direction of a department or a shop. In general, such men, whether workers, foremen, or superintendents, are now developed only by chance, and they are then self-made men, possessing the merits but also the shortcomings of their training.

"Meanwhile boys (and girls) are not only not directed toward the trades in our existing schools, but are actually often directed away from them by the bookish education of those schools and their purely academic traditions. The public schools are doing their work to-day better than they have ever done it. This statement is made on evidence and is not merely an opinion. But, both on account of the youth of the children up to the end of the grammar-school period and because of the general education which those schools exist to supply, it is only natural that they should not have concerned themselves with the development of a vocational purpose nor with the training which points toward the realization of that purpose Up to the age of 14 the whole of a pupil's time is required for the general education on which his vocational training should be based.

"The high school pupils have entered a longer career of general education, and in most cases look forward to a business career or to fruther study in some higher institution for a profession. The academic high schools, accordingly, even when they comprise so-called commercial courses or courses in manual training, are not vocational schools; they are schools for general education, and, like the elementary schools, are doing their work better than they have ever done it. They do not, however, aim to supply the specific education required for a particular calling.

"In every democratic society the schools provided the public should meet the needs of all classes—those who are not going to college, as well as those who are. The existing public high schools serve to give a general education to those pupils whose training must cease on graduation, and at the same time they offer preparation for admission to college or some higher technical school. The manual training high schools—or so-called technical high schools—were intended originally to train recruits for the trades, but they have not done so. They are institutions for general education, like the academic high schools, but, unlike them, serve to give a certain class of pupils a general high school educa-

tion with the help of manual training, or, like them, to prepare their pupils for higher training in some college or engineering school.

"Boys are not wanted in most of the skilled industries until they are 16 years of age. The total result is a great number of boys and girls from 14 to 16 years of age, most of whom are at work in various kinds of juvenile occupations, in which they learn no trade, are subject to little if any beneficial general education, and often to much harmful education from shifting experience and environment. Large numbers of these children would be in school if the school promised preparation for some life pursuit. These years are of little economic value to such children, and there is little increase in the economic value of most of them as time goes on. Hence, these are at present wasted years—lost to the children because of a lack of economic growth, and to the industries because children are not fitted to satisfy the demand for trained workers by the time they are old enough to be employed in the trades.

"These years and the subsequent years are, however, valuable for industrial education; but there is at present no agency whereby this education is provided, save here and there to a limited extent only, and then chiefly by philanthropy.

"Hence the need of industrial schools to supplement the existing school system, and to meet a new educational need which has developed with the evolution of our industries and commerce."

Foreign Industrial Training.

GERMANY.

The industrial schools of Germany are justly celebrated for their thorough, systematic, and comprehensive instruction. They cover the whole educational period; there are the lower industrial schools, which connect directly with the common schools, and thus become continuation schools and give training to workmen; the higher industrial schools, which correspond to our technical colleges and produce the leading technologists; and the middle industrial schools for pupils who have gone through the lower industrial schools, but who desire to shorten the period of higher education, although they wish to prepare themselves to become upper foremen or assistant superintendents.

As a usual thing, the instruction in the lower school is given in the evening and on Sundays; but there is a general movement toward carrying on all this instruction in the day time, as is now chiefly done in the city of Munich, where these schools are found in their greatest perfection.

It is by a combination of the financial resources of the city, the trade guilds, and the central government that the great expense of these schools is met. But their importance is fully realized. Attendance upon these schools is compulsory for apprentices. In the lower industrial schools of Munich instruction in about 40 different trades is provided.

In Germany, as in the other European countries, the State takes the liveliest interest in the encouragement of local industries. In one of the Munich technical schools, whose building cost half a million marks, the annual expense of maintenance is 80,000 marks (about $19,000), of which the State contributes one half and the city the other half. In another of the Munich schools, where there are some 1,800 pupils, with a teaching staff of 100, the equipment is most complete; in the printing department, for instance, 28,000 marks were expended on machinery alone.

Of the special industrial schools in Germany, those devoted to textile industries are among the most interesting; and here again was found a lower school for the training of workmen and a higher school for the development of superintendents and specialization experts.

Berlin is, with its great school of arts and its industrial art museums, without question, the great center of industrial art in Germany. These institutions offer both day and evening instruction, and the classes are well attended, the total number of pupils running well up into the hundreds.

It has been distinctly recognized in Germany that there must be a proper blending of purely educational and purely industrial forces in order to produce the desired effects in industrial education; nevertheless, in this combination it has been the industrial force which has had the administrative duties to perform, and the purely educational force has been active chiefly in an advisory capacity.

Attention is called to the following quotation from a special consular report, printed at Washington (Department of Commerce and Labor, vol. 33, p. 137),

which indicates the most satisfactory methods of industrial school management shown by the experience of Germany:

'The experience of Germany and the administration of her industrial schools goes to show that the subordination of the system of industrial education to the same administrative body which controls the system of general education is unwise. It also goes to show, on the other hand, that the total withdrawal of the industrial schools from the influence of the administrators of the schools for general education is likewise detrimental to their most efficient development, as will be at once recognized. This is due to the fact that industrial schools have two sides to their constitution—an educational and an industrial side. Proper education methods must be employed, and the educational needs of industry must be wisely judged. One requires knowledge of educational method; the other of industrial aims and requirements. A wise administration has hence been found to involve the participation and cooperation of two administrative departments—that which has charge of educational affairs and that which has charge of industrial affairs. As was seen, such cooperation, though expressed in various forms, is practically universal in Germany; that department in which is vested the administration of commercial and industrial affairs almost invariably exercising a predominant control, while the educational interests of the industrial schools are generally safeguarded by advisors, councils, commissioners, and other bodies well informed on modern education methods."

FRANCE.

Up to the beginning of the last quarter of the nineteenth century France had regarded industrial education as within the sphere of local control entirely, on the ground that each community best knows its own industrial needs. The result is that there grew up a large number of independent local schools for the education and training of industrial workers. In the latter part of the seventies, however, the General Government began to take that active part in industrial education which has marked its policy during the past 25 years. How this activity has increased is shown by the fact that while we find in 1880 but 48 of the broadly designated industrial schools received State aid, yet only 20 years later nearly 300 schools were receiving aid from this source. It is markedly significant that the power of such control is invested in the department of commerce and industry. A few special schools relating to industries, however, are under the control of other departments.

The ministry of public instruction and fine arts has oversight of the distinctive schools of the theory and application of art.

The schools relating to roads, bridges, and mines are under the university of public works.

It was found that the industrial schools of France, even at the present time, exist under a great variety of conditions as regards control, maintenance, and functions. There is a well-developed and comprehensive system of trade and technical schools under Government control; there are separate schools maintained by departments and municipalities; there are numerous so-called private schools which are maintained by private individuals or private or semiprivate organizations.

In general, the schools carried on under Government auspices furnish a broad, fundamental training in scientific and technical work, which prepares the pupil to specialize later, and enough practical shop work is given (particularly in the metal and wood working trades) to develop such manual skill in the pupil that he can enter at once upon the practical work of some handicraft after leaving the school, not as a master workman, or even a full-fledged journeyman, but as an advanced apprentice.

In France the pupils begin their trade studies as early as 13 years of age, and the training received has a thoroughly recognized value in francs. The French schools are conducted on much more formal lines than in England, and some of the Paris schools draw upon the various departments of France as well as upon Paris for their pupils. The high character of the work in French schools is particularly noticeable—even that done by the youths whose ages do not exceed 15 years.

A decided tendency of these schools is to educate the pupils artistically as well as in skillful manipulation. Places in the schools are eagerly sought by ambitious young people who desire to prepare themselves for higher positions in the trades, for they recognize that this education means greatly increased earning ability.

Breadth of training in the French schools is indicated by the training given in the Estienne Professional School for Bookmaking, where during the first six months of instruction the pupil is introduced to the rudiments of the various associated trades taught in the school; he is then required to make a choice of one of the 17 specific trades taught, and this he follows to the end of his course.

BELGIUM.

The industrial schools of Belgium are patterned after the French schools rather than after those in Germany, but in government they more nearly resemble the English schools The State has adopted the method of subsidizing local schools and such supervision as this implies.

The schools have various origins; some are of independent establishment, some have been founded by the communes and others by the Provinces. They are all, however, under a rigid Government inspection. A corps of qualified inspectors is maintained for this purpose by the department of industry and labor, which has control of this branch of education.

The State grants are in proportion to the practical value of the school. For the general industrial schools an appropriation is made of one-third of the total expenses of the school in excess of the payment for rent and receipts from tuition. Trade schools proper receive from the State two-fifths of the expense of maintenance and also one-half the cost of equipment with appliances for instruction.

Tuition is free in some cases, in others a small entrance fee is charged, while in some a tuition fee is charged.

The plan of organization and program of all the schools must be approved by the State; but the detailed practical administration is in the hands of a local commission, some members of which are appointed by the State and Province. The mayor is usually chairman of this commission.

Since the schools are established to meet special wants of different localities they can not be distinctively classed as those found in some other countries. They are, however, subject to a rough classification as industrial schools and trade schools. In all schools trade and industrial drawing from life and models is made a special feature of the instruction.

It must be remembered, however, that the Belgians pay special attention to the trade education of their young women. The schools for young women may be divided into trade schools proper, in which special manual training is taught, and housekeeping schools. Some schools combine the characteristics of both divisions.

In the trade schools broad general courses are given, as well as special trade instruction in dressmaking, millinery, artificial-flower making, ornamental drawing, painting, making of lingerie, and embroidery.

The housekeeping schools fit girls both to care for their own homes and to go into domestic service. A course of general instruction parallels the practical domestic work. These schools are numbered literally by hundreds.

There are also combination schools, which fit girls for trades and at the same time give thorough instruction in housekeeping. In these schools less time is devoted to general studies.

Usually the instruction in these girls' schools extends over three or four years, but in the schools where housekeeping is given most prominence a year less is required. Such schools may be reimbursed by the State for as much as two-thirds of their operating expenses.

Advanced trades courses are given to those graduates of the trade schools who wish to become forewomen.

SWITZERLAND.

In Switzerland there is provision for the supervision of the apprenticeship system. The regulations are quite minute but very comprehensive. Their aim is to elevate apprenticeship and develop the professional value of workmen in the various arts and trades, etc. Among other things apprentices must be given instruction; the employer either himself instructs or causes the apprentice to be otherwise instructed in a gradual and complete way in the profession, art, trade, or branch of trade which is the object of the apprenticeship contract, for each apprentice must be allowed during the work period such time as is necessary for the performance of his religious duties and the scholastic instructions required by law.

The laws of the different cantons provide for the supervision of apprentices, their examination, penalties for breach of contract, duties of the master, duties of the apprentice, civil duties, etc.

ENGLAND.

While in England there are national subsidies and, consequently, national control of industrial education, yet the local conditions vary enormously, and no one place will stand as a representative example of the whole country or even of any extended section of it. There can be no doubt, however, as to the national and local awakening to the need of industrial education, but the existing social conditions which have to be met and which are not only peculiar to England but to the separate localities, will make progress slow and experimental. It seems to be a fact, however, that in general the industrial education movement is most active and furthest advanced in London.

In Liverpool, with its great technical school which cost upward of half a million dollars, the conditions are most interesting. There are 1,500 pupils in the evening classes, but, except for some special summer classes of adults, this finely constructed and well-equipped building is unoccupied during the daytime, largely, perhaps, because it is feared that daytime industrial instruction would interfere with the regular public schools by prematurely attracting pupils from them. As a rule pupils do not apply for instruction in this school unless they are working or have worked in the trade that they wish to study, the evening pupils being employed during the daytime in the occupation in which they seek instruction.

The famous Manchester School of Technology is housed in a magnificent building which cost $1,500,000, and run on a correspondingly large scale. The enormous running expenses are paid in part by the State, in part by the city, and in part by students' fees.

London seems to be fairly well provided with polytechnic schools of the class of those in Manchester and Liverpool, for it has seven such institutions, to which boys of 16 to 18 years of age are admitted after a shortened course in the secondary schools. Its provisions for elementary technical education assume enormous proportions.

SCOTLAND.

In Scotland the two representative institutions devoted to industrial education are the Heriot-Watt College at Edinburgh and the Glasgow and West of Scotland Technical College at Glasgow. The work of the former school embraces day, evening, and summer courses along the lines of applied education.

The Glasgow and West of Scotland Technical College at Glasgow is housed in a new building of imposing proportions. Originating as long ago as 1796 as Anderson's College, it owes its existence to John Anderson, professor of natural philosophy in the University of Glasgow, who was in the habit of visiting the local works, and thus becoming acquainted at first hand with the trade industries of Glasgow and the men who carried them on and did the work. In 1886 this college was united with other local institutions to form the great school which is now conducted under the present name. It was the declared object of the school "to afford suitable education to those who wished to qualify themselves for following an industrial profession or trade." The expressed purpose of this school is not to supersede the ordinary apprenticeship but rather to supplement it.

There has been spent on the building nearly a million dollars, and an additional expenditure of $350,000 is planned for. The equipment has cost $125,000 and an additional $150,000 is deemed necessary to place the instruction on the desired basis.

The total attendance on the school is about 6,000 students, three-fourths of whom are evening pupils. It should be distinctly noted that about 70 per cent of the day students and 80 per cent of the evening students are over 20 years of age. The day students come from all parts of the British Islands and the Colonies, while practically all the important works within 25 miles of Glasgow are represented in the evening classes.

IRELAND.

In the field of industrial education the main work of the department of agriculture and technical instruction of Ireland is to provide proper instruction for those who have finished with the elementary or intermediate schools, and who

are already engaged in some employment or are obtaining advanced education in some higher institution. The vast majority of persons who are to be provided for have but the elementary school education, and yet in order to obtain the highest results, their education must be carried on to quite an advanced stage. In order, however, to benefit most from the technical schools, a preliminary practical experience is a necessity. This can be obtained by boys in the lower schools by woodwork, drawing, and elementary science instruction and in the county schools by elementary agriculture; for girls, the corresponding instruction should be needlework, cooking, laundry work, and domestic science.

Few persons outside of Ireland are aware of the extensive provision made for industrial education in Ireland. This matter is considered of such importance that a sum of no less than a million dollars is spent annually in this island for this object, and this with a population not very much larger than that of Massachusetts. Of this sum $250,000 is contributed by the local authorities and the remainder by the council of agriculture.

It is significant that the work of giving industrial training in Ireland is in charge of a department bearing the title "Department of agriculture and technical instruction for Ireland," thus placing agriculture and the handicrafts on the same plane. This department is of recent creation, and the impulse given by it to science and technical instruction may be realized when it is stated that in 1900 but 6 secondary schools possessed laboratories, while in 1907 265 of these schools are equipped with these important adjuncts.

An elaborate scheme has been prepared for the technical training of all classes which desire to pursue some special trade or handcraft calling, and schools appropriate to their needs have been established. The larger cities have established technical institutes on a most elaborate scale, in which various trade and academic courses are offered. Prominent among these schools are the Municipal Technical Institute at Dublin, Cork, and at Belfast. These schools are housed in magnificent buildings and possess thorough equipment for trade instruction.

METHODS OF ACCOMPLISHMENT, SHOWING SYSTEM AND TYPES OF SYSTEM.

NEW JERSEY.

Schools under industrial education act.—Three State schools have been established under the industrial education act of 1881—the Newark Technical School (1885), the school of Hoboken (1888), and the Trenton School of Industrial Arts (1898). The Hoboken school is operated in conjunction with the schools of the city. It is coeducational and offers instruction chiefly to those who come, during the day, from the seventh and eighth grades of the public schools. The Trenton and Newark schools are coeducational, and give instruction almost entirely in the evening to those who are at work during the daytime. The last-named schools afford instruction of elementary and secondary type. The Newark Technical School was the first to be established under the industrial education act. Its growth has been persistent and steady. It has withstood the temptation to become an institute of technology, and has hewn to the practical lines laid down by the industrial education act. Its graduates are found among the "captains of industry." Their record as to financial earnings is a striking illustration of the money value of the right sort of industrial training. The student of the Newark Technical School and of the Trenton School of Industrial Arts are drawn chiefly from among those who leave the elementary school early in life in order to go to work, and they are earning their daily bread while obtaining a technical education. It speaks well for such institutions that the average graduate of the Newark Technical School, for instance, has added an income of $1,000 per annum to his earning capacity above that which he would have had if he had not attended the evening school. And the economic vlue of industrial training is not to be disregarded. The economic need will bring back to the evening schools thousands who will learn to do their work better and to perform a greater service to society.

MASSACHUSETTS.

Plan of independent schools.—Industrial schools must be established as independent schools, because the motive or end for which they exist, namely, vocational training as contrasted with general training, determines the value of the instruction in every detail. In order to keep such schools in close touch with

the trades and with agriculture there should be local advisory boards, including representatives of the industries concerned, employers, and employees.

Such schools should offer four years of training, as described below, for pupils 14 or 15 years of age on admission; but it believes also that such schools will be developed gradually. Pupils who could take only a partial course in the proposed schools would be all the better apprentices because of their school training, however brief it might be.

When the schools are fully established the commission believes the four years of instruction might be divided as follows:

The first two years would cover general shop instruction, at least two hours per day, together with related mathematics, drawing, natural science, and English.

The work of the last two years—which could be gradually completed during a longer period in the evenings, or on the part-time system, meaning part of the time in the factory or shop and part of the time in the school during working hours, whether on the same day or at intervals of several days, or even weeks, by pupils who were obliged to go to work at 16—should give the shop instruction for particular trades, and for each trade represented the drawing, mathematics, mechanics, physical or biological science applicable to that trade; the history of that trade, civics treated as concretely as possible; and shop and business English.

It is further intended to provide for evening pupils; and it intends to make every effort to secure the cooperation of employers, to the end that part-time courses for apprentices may be established in the proposed schools.

There has been established under this plan five day schools, as follows: In Lawrence for textiles, in Beverly for machinists, in New Bedford for miscellaneous trades, in Northampton and Montague for agriculture.

NEW YORK PLAN OF FACTORY SCHOOLS.

Separate schools, but to articulate with public-school system.—The law providing for the establishment and maintenance of industrial and trades schools divides these schools into two classes: (*a*) industrial schools open to pupils who have attained the age of 14 years, and (*b*) trades schools open to pupils who have attained the age of 16 years. Both classes of schools are under the control of local boards of education, having full power and authority over teachers, courses of study, and equipments. Each school is required to have an advisory board representing the local trades and industries, to counsel with and advise the local boards of education.

This system of industrial and trades schools is to be flexible enough to provide: (1) for those who can attend school all day; (2) for those who must work a part of the time in order to earn a living, but can afford to go to school a part of the time, and (3) for those who must work all day, but can attend school at night.

It is planned to have four-year courses in these schools, first, because this length of time is necessary to produce the requisite mental and physical training for a life of progression in industrial efficiency; and, second, because it enables the school to attract and hold the student from 14 to 16 when his growing power is greatest and his earning power least. The studies for the first two years are quite general in character, being designed to round out the elementary school instruction, laying the foundation of industrial efficiency, and arousing a set of industrial interests that will demand the work of the next two years for their fulfillment. For the last two years the studies will be more specific in character. The first two years should have developed an interest in industrial subjects, and by this time the pupils ought to have determined whether they desire to continue industrial work in the industrial school with a view to preparing for the trade pursuits, or whether they had rather enter the regular high school.

Having held the boys and girls in school for a period of two years beyond the compulsory age, and having aroused a set of industrial interests, and having, it is hoped, made their parents feel the value of education, it is proper that they elect the trades-school work which, according to the New York State law, comes when children have attained the age of 16 years. It is intended that these trades schools be a partial substitute for apprenticeship or the learning of a trade in commercial practice. Their aim is to impart the maximum of specialized skill and technical knowledge in the minimum of time, and in order that it may be economically possible for the future workman to attend these schools their

courses must be highly specialized and must concentrate upon the development of skill and knowledge of direct practical bearing. However, it is the intention of the department to insist upon some form of bookwork and drawing in connection with this special shop practice, believing that the trades school proper should aim to give such an ideal preparation for the trades as shall abolish the drudgery and waste of the learner's time in the shop by supplying in the school an economic instruction in the practical work and in the necessary theory of the trades. These schools are professional schools for those who are to become workmen. Trade schools approach as near to making artisans as medical or law schools approach creating efficient doctors and lawyers. The old saying, "Practice makes perfect," is applicable here.

There should be in the curriculum of the trades school, therefore, nothing that is not of direct assistance for preparing pupils for work in the trades. Such mechanical drawing, mathematics, applications of elementary science and English as are necessary will be given with the direct purpose of increasing the individual efficiency of those who are to be young apprentices.

The department has been using the term "general industrial schools" and "trade schools" with the conviction that the industries could be classified under two heads (1) those which employ such methods of production as require many employees who work with much machinery, and (2) those in which much of the constructive work is essentially industrial and quite independent of machinery. In the first class are the highly specialized industries, such as shoes, textiles, knitting, and clothing. The department believes that industrial education fitting the needs of workers in these industries must aim to train all-round workmen, or at least so train the graduates of its schools that they have the requisite adaptability and skill to advance readily through the various activities of the factory. In the second class are the trades of plumbing, pattern making, book binding, printing, cabinet making, etc. The department is convinced that workers in such trades need such perfection of skill and intelligent direction of efforts as will make them masters of one trade, and it is the business of the public schools to give all possible help to such people. Indeed, we are already doing this for those in the professional and managerial ranks.

The department finds the urgent need for evening trade and technical classes for bettering the opportunities of men and women already employed in industrial occupations during the day. One of the most important services which can be rendered by existing schools that have shop and laboratory facilities is to offer such opportunities through practical courses of evening instruction.

In general, these schools should be of every kind for which there is a demand on the part of the people. The system should be exceedingly flexible. The school should be taught by workmen who can teach, rather than by teachers who have theories about work. The instruction should be "shoppish" rather than "bookish," although of course book work is always desirable.

The first school under this plan was established in Rochester in December, 1908. Plans for several others are underway.

THE MILWAUKEE SCHOOL OF TRADES, MILWAUKEE, WIS.

The Milwaukee School of Trades was founded by the Merchants' and Manufacturers' Association of that city. It was opened for instruction in January, 1906. The trades first taught were plumbing and pattern making, in day and evening classes. Instruction in telephone cable splicing was given during its first term of six months. Beginning with September, 1906, a course in the machinist and tool-making trade was instituted, and instructional work in telephone cable splicing was discontinued.

The school grew so rapidly and was proving so great a help to the young men of Wisconsin that it was deemed advisable to introduce a bill into the recent legislature at Madison, requesting a one-half mill municipal tax on the taxable property of Milwaukee, for the use of industrial education. The bill met with immediate favor, and became an act.

This is the first trade school in the United States to be sustained by a special levied tax for industrial education, giving tuition free to the residents of Milwaukee between the ages of 16 and 20 years.

Trades offered.—Pattern making; machinist and tool making; carpentry and wood working; plumbing and gas fitting.

The length of the course in each trade consists of two years of 52 weeks per year and 44 hours per week, with the exception of the plumbing trade, which

requires but one-half of the above time. School closes for legal holidays only. It is the aim of the school to place the student in conditions as nearly as possible like those he will meet in actual practice. School hours are from 8 to 12 and from 1 to 5 daily, except Saturday. Saturday session, 8 to 12. Evening classes, 7.30 to 9.30, on Monday, Tuesday, Thursday, and Friday nights of each week from October 1 to April 30.

It is not the purpose of the school that its graduates shall be merely skilled artisans; it is intended that they shall be not only trained and efficient, but intelligent workmen, desirous of making the most out of themselves in their chosen vocation from its every point of view.

It is also the aim of the school to secure instructors who are specialists in their line, men who are interested in the work, and who can impart their knowledge and experience to apprentices.

The class of work given to the students is carefully planned to be as nearly as possible of equal educational and practical value. Thus the student's interest is aroused and held. A high standard of workmanship is demanded from every student and only those attaining are permitted to graduate.

The night classes are planned principally to supplement the experience of apprentices and workmen who are employed during the day at the trade in which they desire advancement under night instruction. The total day instruction of the two-year courses requires 4,464 hours. The total night instruction of one term of 31 weeks at 8 hours per week amounts to 248 hours. Thus it is evident that none but students of exceptional ability and determination could expect to serve the entire school apprenticeship in night classes only. The school does not advise students to attempt to learn a trade by this means.

Students must supply their own drawing instruments and all drawing material, and are requested not to purchase them until properly advised by their instructor.

The school grants a diploma to each student completing the prescribed course in a satisfactory manner and passing the final examination.

Any student who completes his apprenticeship, as outlined in the regular course, in less than the scheduled time for his trade, may graduate and receive diploma as soon as he passes all the requirements incidental to that trade in a satisfactory manner.

The school does not guarantee positions to its graduates. It has, however, many applications for them, and those attaining the best records, in point of application and ability, will be recommended for the best positions. It is not the policy of the school to recommend apprentices before they have successfully completed their course.

PARTIAL TIME TRADE SCHOOL.

Dean Schneider's plan, Cincinnati, Ohio.—The cooperative system: The fundamental principle of the cooperative system is very simple. It is this: The technique or the practical side of the work is taught only in a shop or store which is working under actual commercial conditions, and the science underlying the technique can be taught properly only by skilled teachers. All questions as to who shall supply the school teachers (the shop or the public); the hours the student works and the hours he is taught; the periods of alternation of shop and school work, if alternating periods be used; and the curricula of the schools—all these are matters of detail to be considered for each particular case.

The economy of the system is at once apparent. In an engineering school, for instance, twice the number of students can be taught at about two-thirds the expense as compared with the four-year theoretical system. The same is probably true in industrial education, for under the cooperative plan the schools will not require any physical equipment; all their money can be used for brains and for buildings for teaching purposes only. There is a further economy to the student. In this case he is earning while he is learning, while under the trade-school system he does not earn until he has completed his trade education. Parenthetically, it should be stated that no displacement of the present high-school courses is contemplated.

The cooperative system is part of the public-school system. The students are divided into two groups which alternate every week. That is to say, this week one-half of the students are in the day school and one-half are in the factories. Next Monday morning these groups will change, and those who are in the school this week will go to the shops, and those who are in the shops this week will

go to the school. Since the public school becomes a part of the apprenticeship system, it has a voice in the organization of the apprentice course in the shop, and is in loco parentis to the boy, so far as his shop work is concerned. It ought to be obvious that the boy will receive a fair training in the shop because the school is in a measure watching over this phase of his work.

It is not intended, of course, that this plan should apply only to factories. It will apply to a boy learning the tailor trade, the butcher trade, the baker trade, or any other trade. It is necessary, however, to obtain two boys to alternate in the shops.

The course is of five years' duration. At the end of that time the student has been taught the simple science underlying his trade; he has been taught shop mathematics; he has been given a certain amount of cultural work; he has become a fair mechanic. In brief, he is at the beginning of specialization.

It has been found, further, that the money earned every alternate week and for full time during the summer is sufficient to pay for the simple wants of these children. It is also true that there is seldom an instance when a child is hindered by financial conditions from taking such a course.

The school in Cincinnati under this plan provides for 226 students, who are at school or at work 9 hours a day, 6 days a week, for 48 weeks.

INTERNATIONAL TYPOGRAPHICAL UNION COURSE IN PRINTING, CONDUCTED BY THE INLAND PRINTER TECHNICAL SCHOOL, UNDER THE DIRECTION OF THE INTERNATIONAL TYPOGRAPHICAL UNION COMMISSION ON SUPPLEMENTAL TRADE EDUCATION.

The commission having in charge the activities of the International Typographical Union was established by the action of the 1907 convention of that organization.

This course in printing is an effort to teach and disseminate the art principles that underlie good typography. It is imparted by correspondence, the student being given personal instruction and criticism of his work by expert instructors. First-class display or decorative typography is not a matter of taste, but results from expounding (usually unconsciously) the well-known principles of design. They are familiar to the commercial artist, and in the course they are made clear to the craftsman, it being written by printers for printers.

The lessons are arranged logically for the man or youth with office experience. Principles are expounded first and then the student solves problems in practical work (either in type or by sketches, as best suits his circumstances) under competent instructors. Nearly twelve hundred students have enrolled within a year. This, notwithstanding it a new idea in typographical education and introduced in a novel way. The course is open to any person engaged as a compositor. The course prepares the compositor for the best work of to-day or to-morrow, is logically arranged, and begins with making the real tools of the printer—letters; shows, through a study of the principles of design, the how and the why of display work; equips compositors to do the work of the designer; insures better results, as ability to design and execute are thus coordinated; elucidates color harmony in a scientific though simple manner by a printer for printers; gives thorough training in all descriptions of display or decorative typography, after the student has been drilled in underlying principles which he applies to his work, which thereby becomes his own production, not an imitation of some other compositor's work; is imparted by a universally commended system of correspondence, which insures close personal attention not possible by the class method of instruction, and insures the student the best advice on trade problems as long as he remains at the trade.

This course makes an especially strong appeal to the victims of specialization, who are now at one branch of the trade, and that not a very skillful or lucrative branch. The prevailing system of apprenticeship deadens the initiative where it is alive and allows it to remain dormant where it is not highly developed.

The course consists of 37 lessons, as follows: The first 9 have to do with lettering, lessons 10 to 14 treat of design, 15 to 19 treat of color harmony, and the next 11 lessons on composition of various kinds, and the remaining 7 lessons consist of information on paper making, plate making of various kinds, and imposition.

PHILANTHROPY.

WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES.

The Williamson Free School of Mechanical Trades was founded and generously endowed by Isaiah V. Williamson, merchant and philanthrophist of Philadelphia, on December 1, 1888.

Its first class was received in 1891. Since that time 726 pupils have been graduated, as follows:

Bricklayers	170
Carpenters	150
Stationary engineers	69
Machinists	198
Pattern makers	139

The school property consists of 24 buildings, located on 230 acres of ground in a beautiful hill section of eastern Pennsylvania, 16 miles from Philadelphia. It has its own light, water, and sewerage plants, railroad station, and post office.

CONDITIONS OF ADMISSION.

Admission of pupils is made in April of each year, none being received who are under 16 or over 18 years of age. The candidates largely exceed in number the capacity of the school.

Natives of any of the States are eligible for admission, but in accordance with Mr. Williamson's foundation deed preference is given to applicants born in Pennsylvania, in certain prescribed order as to various counties.

As the Pennsylvania candidates are very numerous, the admissions for some years past have been necessarily confined to such.

Candidates are required to pass scholastic, moral, and physical examinations, and only those are accepted who are able-bodied, moral, intelligent, and possessed of natural aptitude for mechanical pursuits.

They must be sufficiently advanced in the common-school branches to enter readily on the school work. The academic examinations include reading, writing, spelling, arithmetic (embracing fractions, weights and measures, and interest), geography, United States history, composition, and language.

Those candidates who are accepted are given a preliminary trial, and all who prove satisfactory are indentured for the term of three years from entrance. Each apprentice takes but one of the five trades above named, the assignment to the same being made before admission.

Special attention is called to the fact that the school is only for young men who purpose following for a livelihood the trades taught them, and no others will be admitted.

SCHOOL LIFE.

By the terms of Mr. Williamson's foundation deed, the benefits of the school are entirely free. These include boarding, instruction, clothing, etc., during the entire course.

The school is open all the year, but regular exercises are suspended during the month of August, when such pupils as desire are given a vacation. There are short holidays at Christmas, Fourth of July, and Thanksgiving.

The trustees deem it to be as essential to have the pupils become good men as good mechanics, and special attention is given to their moral training. The school is nonsectarian, but each pupil immediately after admission is required to designate the religious denomination of his choice, and thereafter attend its services regularly at its place of worship in the neighborhood.

METHODS OF INSTRUCTION.

The school is in session eight hours daily on five days of the week, and three hours on Saturday, each apprentice spending about one-half of the time in the shops during the first year, the proportion gradually increasing until the last few months of the senior year, when it includes the entire day. During the last year of the course there is evening instruction three days in the week in strength of materials, higher mathematics, and theory of steam engine.

The branches taught in the academic department are reading, writing, grammar, arithmetic, algebra, geometry, trigonometry, physical and political geography, United States history, English literature, physical science, physiology and hygiene, civil government, chemistry, elementary vocal music, theory of the steam engine, strength of materials, building construction, mechanical and free-hand drawing, and estimating.

The instruction in drawing pertains directly to the apprentice's particular trade. The mechanical courses are systematic and the exercises are very comprehensive and thorough, and are based on instructional methods. The school is not a factory, and nothing is made for sale, its sole object being the benefit of its apprentices.

Although our school day is eight hours long, there is generally excellent attention in both mechanical and academic departments, the happy combination of the two leaving our young men fresh and bright at its close.

We have secured most excellent results from devoting about one-half of each hourly period in the academic department to recitations and the remainder to preparation of the succeeding lesson in that particular subject, under the teacher's supervision.

One hour five evenings in the week is also devoted to study in the pupils' rooms. There is no doubt that training for the professions (architecture, engineering, law, medicine, teaching, etc.) is best made in educational institutions conducted for that purpose. Similar principles and methods applied to the five trades taught in this school have given remarkably satisfactory results. Indeed, the necessarily closer connection between instruction and practice in trade teaching increases the efficiency of the same.

Instruction in trades is just as advisable and commendable as instruction in the academic branches. No one would think of suggesting the abandonment of such methods in algebra, geometry, chemistry, etc.

If intelligent young men are given carefully graded and comprehensive exercises in trade work in properly equipped school shops by competent teachers who are high-grade mechanics, with suitable accompanying academic instruction (especially in mathematics and mechanical drawing) and course of sufficient length, they will surely become skilled workmen.

This has been our experience, and with us trade education in schools is not a matter of inference or theory, but a demonstrated fact. Instruction rather than construction has been shown, after an experience of over 17 years, to be wonderfully efficient in developing a class of journeymen mechanics of the finest grade, and the reports from employers enable us to say with entire confidence that our school apprentices immediately on graduation are, as an average, more valuable and proficient than shop apprentices when they "finish their trades."

Our pupils realize that our instructional methods are for their benefit, and their interest in their work is increased by this knowledge. It is greater we believe than it would be if we worked on commercial lines. In that case we should be obliged to subordinate their instruction in a considerable degree to our financial gain. The young men know that if we produced for the market it would be necessary to keep them to a large extent at familiar processes, even though they might be prepared for more advanced exercises, and that then they necessarily could not progress as rapidly as they would when the sole purpose is their benefit.

It is our endeavor, especially in the senior year, to impress upon our pupils the necessity of doing work rapidly as well as accurately, and speed exercises are used for this purpose Time cards are issued for many exercises, to foster in the apprentices the habit of working expeditiously; and the cost of materials and the careful use of the same are also impressed upon them. This feature adds to our graduates' commercial proficiency and aids them in obtaining the good wages which they receive immediately on the completion of their course. The value then placed on them by employers is a positive indication of their efficiency as journeymen.

GENERAL RESULTS.

Ninety-five per cent of our graduates enter at once on trade work at wages of 60 to 100 per cent of full journeymen's pay, nearly all receiving the latter in less than 12 months. That compensation is often gained within three months after graduation, and in not a few cases immediately.

PRATT INSTITUTE, BROOKLYN, N. Y.

Pratt Institute was established in 1887, after many years of study and careful investigation of the subject of trade and elementary technical education by its founder, Mr. Charles Pratt, a prominent manufacturer of Brooklyn. Mr. Pratt was a self-trained man—intelligent, industrious, and of wide practical experience. He wished to make the institute a school where young men and women situated as he had been could have opportunities such as he had lacked, which would be of help to them in their life work. His own personal experience inspired and guided him. He understood what young people, forced to make their own way in the world, needed, and he knew where the average school failed to give the necessary aid. He therefore was able to plan the work of the institute with an insight and a foresight that has always commanded admiration.

Mr. Pratt never lost sight of the value of machinery in practical work, but nevertheless he always put the emphasis on the value of the workman back of every piece of machinery. He saw back of the machine the man who designed it, the mechanics who made it, and even the operators who tended it. He wanted the institute to reach and help these practical workers, and his purpose was to have its courses so conducted as to increase the intelligence and the efficiency of such persons, thus doing for them what modern machinery and invention had done for those industries in which such improvement had been most extensively applied.

Pratt Institute has always held steadfast to this purpose of its founder, and its principal aim has been to promote industrial education. It offers trade and elementary technical courses during the day and night for both men and women. These courses cover a wide range of subjects in mechanical, scientific, artistic, and domestic fields of occupation; and almost any young man or young woman who is ambitious for advancement can find among them opportunities for instruction and training which will increase his or her efficiency in trade or calling, or in the intelligent performance of the home duties. There are also normal courses in four departments, for the purpose of extending the ideals of the institute and of increasing its influence.

The institute opened its first classes in October, 1887, with but 12 students. Its enrollment in 1906–7 has reached a total of 3,719 persons, 2,259 being enrolled in the day classes and 1,486 in the evening classes. During these 20 years it has given training to 61,206 individuals.

INDUSTRIAL EDUCATION FOR GIRLS.

The aim in the industrial education of girls is a double aim, viz:

Preparation for an occupation for immediate self-support, and

Preparation for home life.

These two aims must be kept in proper balance. Any system of industrial education for girls will be inadequate that does not provide for both aims.

Ability to earn money is of such prime importance to the young girl that she has little inclination for domestic life or the training which will be of vital importance to her later in her life.

Since most women who engage in wage-earning industries (as well as others) are at least potentially wives and mothers, training for housekeeping and home management is believed to be an essential part of their education, whether it be industrial or general.

But since a large part of the girls now leaving school at 14 must prepare to earn their living by industry, the prime interest of the school pupil is likely to center upon training for wage-earning occupations.

The vital importance of domestic education for girls does not change the fact that the progress of such education depends largely upon the sentimental attitude of young people toward this kind of work as a vocation.

A high standard of skill and knowledge of housekeeping in all its branches and details is of such far-reaching effect upon the future of any community that every effort should be made to shape public opinion toward a true appreciation of its importance and dignity.

Women and girls are employed in mechanical occupations connected with very many industries in the country, and these occupations of women are not only affecting industry, but the standards of womanhood and the home.

It is therefore of the utmost importance that young girls who must work in shops and factories be trained for occupations which do not prevent development or incapacitate them for future mothers and home makers.

It is believed that much can be accomplished in establishing day and evening schools for domestic science by having the equipments adequately adapted to the requirements. For instance, pupils should learn cooking, housework, and household management in kitchens and rooms in every respect typical of real conditions in homes of various grades of economy and incomes of various amounts. And the girl who wants to become an expert scientific cook or housekeeper should be taught with highly improved and perfected equipment.

If it should be thought by anyone that the comparative importance of industrial training did not depend so much upon the number of workers as upon the character of the work itself, it would seem most reasonable to consider the scientific conditions underlying the nature of good food preparation as influencing right living and good health; also the importance of good housekeeping and wise home management as influencing thrift among our working people and good citizenship throughout the country.

The home training of girls may be accomplished in two ways:

First. By such specific training for this as is compatible with the trade instruction, and,

Second. By having trade schools for specific domestic training, with courses both for pupils who may aim to make a wage-earning vocation of housekeeping in all its branches and for those who wish to become thoroughly prepared to conduct homes of their own.

Such courses would include considerable academic and scientific schooling.

Whichever course is pursued there is sure to follow a very important reaction on the home from the added intelligence, higher ideals, and greater earning capacity of the graduate of such industrial schools.

With girls, as with boys, the time in life when general education ceases to appeal to them is between the fourteenth and sixteenth years, and at these ages a large percentage of girls enter the less skilled occupations.

Girls usually remain at work from five to eight years, during which time their social scale, their standard of efficiency, and the type of their future homes are largely determined.

Margaret Morrison Carnegie School.

The Margaret Morrison Carnegie School offers courses adapted to meet widely differing needs. These are divided into the following heads:

1. Day school—
   (*a*) Regular home maker's course, with technical specialization.
   (*b*) Graduate year for the training of teachers.
2. Night school—courses for home and trade use.
3. Special-subject courses.

Although the work given under these heads varies to meet the requirements of the different courses and the needs of the students enrolled therein, the main aim and purpose of the school remains the same throughout all of the courses, namely, the development of the individuality and womanliness of the student and the utilization of her powers in the broadest possible way along the lines of her keenest interest and greatest aptitude.

DAY SCHOOL.

1. (*a*) In its three-year regular course the school offers a broad education, the frank purpose of which is the development of the student as a woman in such a way as to enable her to express to the full her individuality and to give her a right point of view concerning the duties, opportunities, and responsibilities of women in the home and family, in the community, and in the State. Special emphasis is laid upon the development of the home-making arts throughout the entire course. In the senior year the student is given an opportunity of choosing one line of technical specialization, which, running parallel to the broader and more general training, should fit her to become productive as a wage earner in case of need.

Applicants under 18 years of age, not high-school graduates, are expected to have had a training equivalent to two years in high or preparatory schools.

NIGHT SCHOOLS.

The night school is primarily for students who are employed during the day and necessarily differs from the work offered by the day school because of the brief period of time that students can give to school work and to outside study.

The sessions are held from 7.30 to 9.30 p. m. on Monday, Wednesday, and Friday evenings.

The school does not attempt to develop experts, but offers to those who are gaining their livelihood by daily employment courses of instruction that will increase their efficiency and hence their earning power.

Modern conditions require that schools of this character shall so train women apprentices that they may acquire a permanent and effective place in those social and industrial spheres to which they are best adapted. For this reason, while the work given accords with the best practical methods, the school endeavors to give to its students, in addition to actual practice, a grasp of the future possibilities in each of the subjects and to lay the foundation for individual development along the lines of these possibilities.

This system of instruction is especially helpful to those who have not had an opportunity to acquire the theoretical foundation and breadth of training necessary for intelligent practical operation. When this broader training is combined with actual practice in all branches of the subjects taught, it should enable the students to advance along their chosen lines more rapidly and efficiently and finally qualify them to fill higher positions than would otherwise be open to them.

Manhattan Trade School for Girls, New York, N. Y.

The Manhattan Trade School for Girls was established in November, 1902. Its aim has always been to train girls who are leaving the public schools so that they can enter a trade with enough skill to make a living wage possible and enough intelligence to advance to more responsible positions. This it tries to do as quickly as the individual can progress, the length of time necessary averaging one year. The tuition is free to young girls.

New York girls can obtain good wages in dressmaking, operating, novelty work, and millinery; therefore these trades were introduced, with art and academic work to throw side lights on the trade, and a gymnasium to make a healthy worker. There has been no occasion to add other trades, but these have broadened into special lines, and the application of general principles has been varied with the changing demands of the trade. Art, first introduced as a handmaiden to trade, is developing into an independent factor. A demand is growing for girls with less training than a school of design gives to do work in copying and adapting designs.

In 1906 the school was moved into its present building, which can be adapted to accommodate 500 girls.

The Manhattan Trade School has placed girls every season for four years, with a gradual increase of wages paid at starting, and a remarkable showing of increase with experience; in special lines of work $20 per week was attained last year. Girls placed this fall (1909) have averaged over $5 per week for their initial wage—an increase of $2 since 1903.

On January 1, 1907, 184 girls were in attendance. Since that time 407 girls have been admitted, making an enrollment of 591 girls during ten months.

The Boston Trade School for Girls, Boston, Mass.

The Boston Trade School for Girls[1] was founded in July, 1904. It tries to reach girls who leave the grammar school as soon as the compulsory school attendance is completed. By training them to enter the skilled trades of dressmaking, millinery, clothing-machine operating and straw-hat making it aims to keep them out of unskilled occupations, where there is no chance for advancement and where mental, moral, and physical deterioration is almost certain. Starting with a membership of 14, the school has grown to 140, and has a constant waiting list because of lack of room. Only girls who feel the need of almost immediate self-support attend the school, and the course of one year is made as intensive and practical as possible.

The equipment has been sufficient to meet the demands in the most economical manner, without too greatly limiting the usefulness of the experiment. Since the introduction of electric power machinery was such a large item of expense it was thought best to provide for the possibility of growth. Thus, while an electric motor was installed of sufficient power to drive 20 machines, only 10 were set up. Foot-power machines, tables, and other articles necessary for

[1] This school ceased to exist in July, 1909, but has been reestablished as part of the Boston public-school system.

plain sewing, dressmaking, and millinery were introduced, and have been added to as the school has increased in numbers. The basement serves as a lunch room, and has been arranged to give a simple training in preparing and serving lunches. The large parlor of the house is used for daily assemblies, trade work, gymnastics, and recreation during the noon recess. An attempt has been made in each department to reproduce good workroom equipment and conditions.

The school day is seven and one-half hours long (8.30 to 5 p. m.), and the school is in session throughout the year. Thirty-nine hours a week are spent at shop practice and eight and one-half hours at academic instruction. Although the work is mainly individual, and classes do not exceed 20, the per capita cost has been reduced during the past year to $137 for the entire year of 12 months. The work made by the pupils is sold, thus giving them the benefit of actual trade practice, and at the same time enabling the school to more than cover the cost of all materials used.

The necessity of adapting the work of the school to the needs of Boston and vicinity led to the introduction of training in the trades which center about the needle and the foot and electric power machines, as these are the trades in which the greatest demand for skilled workers exist, and hence the greatest opportunities for the pupil.

The departments of the school at present are dressmaking, millinery, and machine operating. In each of these departments girls are prepared to enter a variety of trades. For example, the work in dressmaking is so planned that girls may take positions as seamstresses, dressmaker's helpers, experienced skirt finishers, waist finishers, or sleeve makers, according as it is possible for them to give a longer or shorter time to the training. The same is true of millinery. Girls are prepared to be frame makers, hat makers, or trimmers, if special ability is shown. In machine operating a great variety of trades are open to girls, since the mastery of the electric power machine is a preparation for many specialized lines of work.

Training begins with simple processes for the control of the needle and the machine, and advances gradually to more difficult parts of the work. Instruction is individual, making it possible for a girl to progress according to her ability. The training is such as to enable a girl to enter her trade, beginning at any one of a number of kinds of work and to advance intelligently along that line. No attempt is made to produce expert dressmakers or milliners, or other trade workers, but rather to give the necessary experience, skill, and speed in some of the more fundamental processes.

The object is to combine the school and the shop. The early training partakes largely of the atmosphere of the school, and is educational in character, giving reasons for processes as well as the processes themselves. The correct way of doing things is emphasized, and little attention is paid to speed.

Girls who can be recommended to positions at the end of the year are placed in establishments where there is opportunity for them to advance in both wage and position. Over 100 girls have been placed in good positions since the school opened three years ago, and are at present receiving wages ranging from $4 to $30 per week.

Apprenticeship System.

New York Central Apprenticeship System.

The New York Central lines established in March, 1906, an apprenticeship system which includes special shop instruction carried on in the regular shop with the boy under actual shop conditions, shop discipline, and shop environment. Combined with this training, he is obliged to attend educational classes during working hours while under pay. In these classes the course of study is entirely practical in character, and illustrates, explains, and supplements the work in the shop by simple and direct methods suited to the needs of the apprentices.

The entire plan is arranged for the beginner, who must start at the bottom. It is one designed to increase the efficiency of the rank and file of mechanics, though it is expected that exceptionally bright boys will profit most by the training offered.

This apprenticeship system, which was installed under the general direction of Mr. J. F. Deems, general superintendent of motive power, rolling stock, and machinery, was described at the 1906 meeting of the American Railway Master Mechanics' Association, and a very complete description of it was published in the American Engineer and Railroad Journal during June, July, September, October, and November, 1907.

In brief, the apprenticeship system may be described as follows:

At each large shop on the system is a drawing instructor who has charge of the educational work. Each apprentice spends four hours a week in the classroom, where mathematics and mechanical drawing are taught. These classes are held in the morning, and the apprentice is under pay while attending. The apprentices while in the shop are in charge of a shop instructor, who is responsible for their proper instruction in the trades and arranges for them to be moved from one class of work to another at regular intervals, thus correcting a fundamental defect in prevailing apprenticeship plans.

The work in the drawing and shop problems is outlined at the apprentice headquarters at New York City, and sufficient flexibility is allowed to fit the personality of the local instructor and the needs of the local apprentices. The plan of instruction is arranged to give the closest possible connection between the work in the shop and the work in the classroom. The drawing is from actual parts from the start, omitting all exercises and preliminary work as such and introducing principles only as needed to gain practical ends.

The instruction is largely individual, with classes limited to enable the instructor to give the greatest amount of personal attention to each student.

All the work that is introduced is in accordance with New York Central lines practice, from which the illustrations are selected. Special emphasis is placed on the personal touch maintained between the instructor and the apprentices, with a view of ascertaining the kind of work or branch of service for which each boy is best fitted. At the expiration of apprenticeship those who have satisfactorily completed their term receive certificates which entitle them to preference in employment at all shops on the New York Central lines.

It should be understood this apprenticeship system implies a full-term apprenticeship, with no disposition to make any short cuts and at the same time provides an opportunity to secure a technical education while under pay.

The boys are from the outset part of the shop organization, contributing to its output, and there is none of what is called "exercise work."

The fundamental purpose of this apprenticeship system is to provide for recruiting the ranks with skilled workmen and to improve the individual efficiency of the workmen for the benefit of the company and the workmen, with the hope that those thus trained will remain as members of the permanent organization.

The results of a recent investigation undertaken by Mr. Cross, the superintendent of apprentices of the New York Central lines, is of interest. It was found that 55 railroads have 7,053 apprentices in 368 plants, while 67 plants have no apprentices. Thirteen railroads pay apprentices to attend schools; 15 make attendance compulsory, and on 13 railroads the schools are held in working hours, while in 5 the school is held in the evening.

GENERAL ELECTRIC CO.

Seven years ago or more this company established an apprenticeship system based on new methods of procedure, with a view of accomplishing the very best results.

The significant feature in the General Electric Co.'s system is the practical training of apprentices in large "training rooms." The boys are in these rooms for two years, after which they are placed in different departments of the factory. This is considered the great point of advantage in the General Electric Works. Educational courses are provided by the company in academic branches which will assist the apprentices to obtain a better understanding of machines and machine parts and will make them acquainted with the problems and calculations connected with the reading and comprehension of mechanical drawings and with the sketching and designing of auxiliary tools needed in modern manufacture. The school sessions are held during the working hours, and the apprentices are paid the same wages during these hours which they would receive if they were working in the shops.

The apprenticeship school is divided into two departments—a machinery department and a pattern department. In the machinery department about 10,000 square feet of floor space is devoted to the use of the school. There are in this department between 300 and 400 operatives in training. The instruction is systematic, and the course is four years. As soon as an apprentice masters a machine he is ready to instruct a new boy to take his place. He remains at the machine until the new boy is able to operate it, when he advances to

another machine. Thus each apprentice as he masters a machine teaches his successor. The school is turning out now two graduates per week, and this number is expected to be increased in the near future to three or four.

The apprentices are paid at the rate of 9 cents per hour for the first year, 12 cents for the second year, 14 cents for the third year, and 16½ cents the fourth year. After the fourth year they are regarded as craftsmen or skilled mechanics. Most of the graduates stay with the company after finishing their course. Some stray, but as a rule the boys prefer to remain in the service of the company.

From an economic point of view the school is virtually self-sustaining, as there is enough work that can be done by the apprentices to pay for the instruction.

A feature which belongs to the General Electric Co. alone, so far as ascertained, consists in examinations in the school work, which are held frequently during the year, with a final examination at the end of the course to determine to some extent the standing of each apprentice and the wages which the company considers commensurate with his value as a journeyman.

NEW YORK TRADE SCHOOL, NEW YORK, N. Y.

The New York Trade School was founded in 1881 by the late Col. R. T. Auchmuty. The purpose of the school was to provide young men between the ages of 17 and 25 instruction in certain trades and to place within the reach of young men already working at those trades the opportunity to increase their knowledge and skill.

Formerly a lad who was desirous of learning a trade was indentured for a long term of years to a master mechanic. With the progress of time the old-style apprentice system has gradually become obsolete. The introduction of machinery and the advance in the practice and science of the trades have altered conditions to such an extent that it is no longer practicable for a master mechanic to undertake the training of an apprentice with that care and thoroughness that should result in developing the lad into a mechanic of the highest skill and intelligence.

The founder of the New York Trade School clearly saw the serious need this problem presented, and to his foresight, personal effort, and philanthropy is due the establishment of the school.

With the disappearance of the old-style apprentice service a substitute best adapted to modern conditions was desirable. The founder of the school felt that the combination of the trade school and the workshop was the solution; the trade school to teach young men the use of the tools, how to do work, and the scientific principles which underlie the practical work; and the workshop to give the young man speed of execution, facility, and experience

The method of instruction used at the school is what is known as the "Auchmuty system" and was originated by the founder of the institution. For each trade taught a course of instruction is prepared, under which both the practical and theoretical branches of the trade are taught. The course of instruction specifies a series of exercises in manual work which each student of the class is required to execute and complete. At first the exercises in the course comprise work of an elementary character and are intended to make the student proficient in handling all the tools used in the trade he may be studying. When a student demonstrates that he has acquired a workmanlike manner of using his tools he is advanced to other work. Each succeeding exercise becomes more difficult and complicated, and a student rapidly acquires skill and proficiency as the course progresses. The work provided for in a course is of a thoroughly practical character, such as the student will meet with in actual practice at his trade. Mechanics of skill and experience act as instructors, and each student receives individual care and attention. In conjunction with the manual work the theory of the trade is also taught. Under this arrangement a student not only learns how to do the work, but he understands the "why and wherefore." This scientific instruction furnishes knowledge of the trade that is of the highest value and is imparted by means of lectures, diagrams, and experiments.

Both day and evening classes are conducted. The day classes are of four months' duration, the instruction being given daily from 8.30 a. m. to 4 p. m. A young man who possesses an aptitude for mechanics and has a good common-school education can in one term complete the course which the school provides.

The evening courses extend over a period of six months, the classes meeting three or four evenings a week for two and a half hours each evening. For the

student who comes in the evening an attendance of from two to four terms is necessary to complete the full course.

The New York Trade School is neither a money-making nor a charitable institution, nor is it conducted in the interest of, or in opposition to, any organization of master or journeyman mechanics. Its scope is educational and philanthropical purely, and its aim is to aid young men who have a desire to become tradesmen. While a charge is made for admission, the terms of tuition are merely nominal and cover but a small part of the cost of maintaining the school. A liberal endowment which the school possesses enables it to carry out the object for which it was founded. The work done by the students is not sold, nor is the labor of the students utilized in any way for the pecuniary advantage of the school. The tuition fees for the evening classes range from $12 to $16, and for the day classes from $25 to $45 for a term. The tuition fees collected from students equal about one-third of the cost of operating the school.

Y. M. C. A. INDUSTRIAL IMPROVEMENT CLASSES AND TRADE TRAINING CLASSES.

On the North American Continent, up to the month of February, 1909, there were 14,965 students enrolled in the Young Men's Christian Association evening classes in mechanical and architectural drawing, design, industrial chemistry and physics, electricity, manual training for boys, engineering, automobile operation and construction, carpentry and pattern work, forging and toolmaking, machine-shop practice, plan reading and estimating, plumbing and surveying, printing, jewelry designs, navigation, shoe-pattern making, and other industrial branches. Seven hundred and thirty-one instructors are employed to teach these classes, which are mostly of the industrial employment order, with a few trade courses. In New York City the Young Men's Christian Association industrial education departments enrolled 946 students in the industrial-improvement and trade divisions as follows: Mechanical drawing, 85; plan reading and estimating, 66; structural engineering, 25; preparatory engineering and drafting, 18; automobile school, 455; motor boating, 23; decorative design, 15; theory and practice of furnishing and decorating, 50; chemistry of fuels, paper making, and leather making, 12; plumbing, 14; steam engineering, 19; textiles, 21; piano designing, 26; course of janitors and superintendents, 27; industrial design, 6; electricity, 65; sign painting and lettering, 5; ornamental-iron drafting, 14. The general rule is to have not more than 15 pupils for each instructor.

Trade and technical courses have been successfully conducted in Detroit, and a special day school at Chicago for apprentices in the building trades is another development; also a school for sheet-metal apprentices at the Lupton Co., Philadelphia, and an additional industrial course at Kensington, near Philadelphia; a school for Westinghouse air-brake apprentices at Wilmerding, Pa.; and one for the employees of the Bell Telephone Co., at Sale Lake City. Another undertaking has been the reorganization of the large boys' club at New Haven, Conn., where about 250 boys have been enrolled in carpentry, electricity, mechanical and free-hand drawing, arts and crafts, sign painting, and boiler firing classes. In addition to these, classes for apprentices, with definite trade instructions, have been established at Worcester, Mass.; Buffalo, N. Y.; Cleveland, Scranton, Dayton, Columbus, Racine, Spokane, Grand Rapids, St. Louis, Cincinnati, Portland, Seattle, Los Angeles, Indianapolis, Milwaukee, and in Boston and many other points in New England.

FEDERAL GOVERNMENT SCHOOLS.

ALL GRADES OF INDUSTRIAL AND TECHNICAL EDUCATION AIDED BY THE FEDERAL GRANTS.

Not only have the Federal grants been devoted in part to the subindustrial or subvocational branches, as manual training and domestic science, as noted above, and for the promotion of higher technical and scientific work in colleges (and the lesser training schools for Army and Navy), but the Federal educational grants have been and now are largely used for trade-school work, industrial-improvement schools, and agriculture-improvement schools (short courses), the most elementary of the strictly vocational work. The 16 schools for negroes, which receive a share of the Federal grants for agriculture and the mechanic arts, have important trade-school, industrial improvement, and agri-

cultural improvement divisions. The trades taught (in the trade-school divisions) include carpentry, blacksmithing, wheelwrighting, shoemaking, brick masonry, stone masonry, broommaking, chair-bottoming, tailoring, millinery, cooking, laundering, printing, machine-shop work, sewing, cabinetmaking, stationary engineering, dressmaking, painting, tinsmithing, electrical work, plastering paperhanging, upholstering, saddlery, harness making, sawmilling, plumbing, steam fitting, carriage trimming, frescoing, besides elementary horticulture, apiculture, dairying, poultry raising, animal husbandry, farming, gardening, housekeeping, and nursing. In connection with the agricultural and mechanical colleges for whites (or in the corresponding university departments), the trades are often taught either in affiliation with the preparatory departments, or, as in a few States (where the entrance requirements are low, or supplemental courses are offered), in the college itself. Work offered to special students is often of the industrial improvement school type. As for the "short courses," given in connection with quite all of the Morrill-aid schools, they are most successful in attracting students as agricultural-improvement schools ("short courses in agriculture"), although as day industrial-improvement schools (i. e., some of the "short courses in mechanic arts") they are also effective. Certain of the short courses are of high technical grade, but the great usefulness of this important type of training lies in its ability to reach the masses with the more elemental and strictly vocational instruction. Especially is this true of the agricultural branches, for the agricultural colleges, it is well known, have not succeeded in training a large percentage of farmers. In the college courses of the 50 Morrill schools for whites, for example, only one student in nine is enrolled in agriculture. There are over four students in mechanical engineering alone for every three in agriculture; four in civil engineering to every three in agriculture, not to mention other departments. The fact is that the country boys and girls drop out of the public schools early, just as the city children leave school permanently in large numbers during the fifth or sixth years of the course. The agricultural-improvement school (short course) is to be their salvation, vocationally, and the counterpart of the industrial-improvement school for the workers in the factory and shop industries and the building trades. But as yet properly constructed textbooks are wanting in many departments of the "short-course" educational field.

THE DEPARTMENT OF THE INTERIOR.

The most important work in industrial education that is performed under the auspices of the Secretary of the Interior is that of the Indian schools, under the Commissioner of Indian Affairs. Industrial and manual training in the Indian schools may be briefly summed up as follows:

Indian schools are maintained as regular public schools (sharing in State funds), as private schools (nearly all of these are mission or denominational schools, some of them with contracts from the Government), or as Government (Federal) schools. The Government schools are of three, perhaps four, classes: (1) Nonreservation boarding schools (Carlisle, Pa., and Haskell Institute, at Lawrence, Kans., are the chief examples); (2) reservation boarding schools (that at Fort Totten, N. Dak., is the largest); (3) Government day schools; (4) Hampton Institute, a private corporation receiving Federal aid. The schools not controlled or aided by the Federal Government do the least, on the whole, in the way of industrial or manual training. The Government day schools do something in manual-training instruction, and the reservation boarding schools sometimes offer trade courses. The highest type of industrial work is found at the Hampton (Va.) and Carlisle (Pa.) nonreservation schools. Most successful everywhere has been the instruction in agriculture, and in cooking, sewing, and other household subjects, but native arts and crafts, weaving, pottery, lace making, basketry, poultry raising, butter making, laundering, printing, and bee culture are branches often taught in the Indian schools. At Hampton (also for colored) a great variety of trades may be found. Carlisle (not far from Harrisburg, Pa.) has students in carpentry, blacksmithing, carriage and wagon making, coach painting and trimming, painting, plumbing and steam fitting, tailoring, harness making, shoemaking, plastering, masonry, bricklaying and cementing, tinshop work, printing, photography, baking, cooking, agriculture, laundering, horticulture and greenhouse work, poultry raising, and dairying. The work is practical. The 50 boys in carpentry (from 12 to 21 years of age), for example, work on actual construction at the school and on repairing; the tailoring students make uniforms for the school, also work-

ing clothes and civilian suits. A superintendent of Indian schools, under the Commissioner of Indian Affairs, Department of the Interior, Washington, D. C., has general supervision of the governmental institutions. The schools are found in a score of the States and Territories. The annual appropriation of the Federal Government is nearly $4,500,000.

THE UNITED STATES NAVY ELECTRICAL SCHOOL.

The United States Navy Electrical School is located at the navy yard, New York, and is maintained by the Government for the purpose of training men to manipulate and care for the many types of electricl machines and apparatus, including wireless telegraphy, used for the various purposes on board of a modern ship. This school has enrolled 245 students in these courses.

There is also an electrical school at the navy yard, Mare Island, Cal., where the course of instruction is, in general, similar to that at New York, described herein.

The students of these schools are regularly enlisted men, and the term of enlistment is four years. Candidates must be American citizens and must be able to pass a physical and a technical examination.

Electricians are enlisted as "electricians third class," with a salary of $33 per month, the age limits for this grade being from 21 to 35.

In special cases, men between 18 and 25 years of age who are skilled mechanics with some knowledge of electricity, or students of electricity who show aptitude for the naval service, may be enlisted as landsmen (for electrician) at the discretion of the recruiting officer. In every instance the applicant must have sufficient education in the common-school branches or experience in or study of electricity, to furnish a good groundwork for instruction in the school. The pay while in this rating is $17.60 a month, with the same allowance as other enlisted men receive. They will be advanced to electrician, third class, as soon as they qualify after examination at the school.

Every person upon enlisting is provided by the Government with an outfit of clothing amounting in value to $60. There are no expenses for board, lodging, and medical attendance while in the service, and the only necessary expense incurred by enlisted men are for the renewal of such articles of clothing as may be worn out from time to time. Thus it is seen that a thrifty person may save quite a litle money even at the lowest grade.

After enlistment, electricians are sent to the school, transportation being furnished by the Government, where they are thoroughly instructed in the use of electrical appliances and the arts of wireless telegraphy and telephony. The men are furnished with books and all apparatus used, and there are no expenses incident to the course.

The workshop is completely equipped with modern dynamos, motors, and electric apparatus and the wireless telegraph rooms with the various types of instruments including the wireless telephone.

Men who leave the school as electricians, third class, may be given acting appointments as electricians, second class, if such appointments are recommended by a board of one or more officers, as a result of an examination in general electricity and wireless telegraphy, as applied to vessels of the Navy. The examination must show that the applicant for the higher rating is qualified to stand a watch in charge of the dynamo room and to send and receive wireless messages at the normal rate.

Electricians, second class, must serve at least one year satisfactorily in that rating before becoming eligible for advancement, unless they receive advancement through unusual proficiency at the school. After one year of such service they may be promoted to electrician first class if vacancies in complement exist.

Similarly, electricians, first class, must serve satisfactorily one year before becoming eligible for advancement to chief electrician, the pay of which is $66 a month. Chief electricians, after having served one year satisfactorily on board a sea-going ship, are eligible for permanent appointment, in which the pay is increased to $77 a month.

Electricians, as well as all other enlisted men of the Navy, are dependent for promotion, to a certain extent, on the existence of vacancies in the higher ratings in the ship to which they may be attached.

The course of instruction is thoroughly practical, and all that is latest and up to date in electricity, as used on board ship, is taught. The instruction is individual, every assistance is given by competent instructors, and the student's progress depends upon himself.

After a course of five months electricians, third class, who are found proficient are promoted to the grade of electrician, second class, at a salary of $44 per month; and in case of unusual proficiency, to the grade of electrician, first class, at $55 per month.

In like manner "landsmen (for electrician)" are promoted one or two grades according to their proficiency.

The home of the students is on board the receiving ship, where they have their mess and keep their clothes and where there is an excellent library which affords facilities for study and pleasure reading.

After leaving the school electricians are sent to cruising ships or wireless telegraph stations on shore, part of their enlistment frequently being spent in both places.

All electricians are petty officers; chief electricians are chief petty officers and hold a very desirable position.

At the expiration of four years electricians are discharged from the Navy, and if they reenlist within four months of the date of honorable discharge they are given, upon reenlisting, four months' pay, whether they remain out of the service one day or four months. They also receive, in addition to the pay of their grade, $6.36 a month for the first reenlistment and an additional $4.36 a month for each reenlistment thereafter.

In addition to the school for electricians there are schools for artificers, cooks, and bakers, and machinists.

PRESENT EDUCATIONAL ENACTMENTS.

CONNECTICUT.

The early interest of Connecticut in State-authorized industrial education is shown by the approval, on June 3, 1903, of an act which runs as follows:

"*Resolved by this assembly:*

"SECTION 1. That the governor be, and is hereby, directed to appoint a commission consisting of three persons, whose duty it shall be to investigate practical means and methods of industrial and technical education.

"SEC. 2. Said commission shall, on or before February 1, 1906, report to the general assembly at its sessions to be held in 1905, and shall make such recommendations for legislation as it may deem wise.

"SEC. 3. No member of said commission shall receive any compensation for services as such member, but the commission may expend a sum not exceeding $500 for incidental and necessary expenses incurred in the discharge of its duties, and said sum shall be paid by the treasurer upon the order of the comptroller, with whom the commission shall file proper receipts and vouchers."

In January, 1907, Senator Luther, president of Trinity College, introduced a trade school bill in the Conecticut Legislature. This bill was thoroughly discussed in the press by various organizations, and a hearing was held before the committee on education on March 1, 1907.

On July 12, 1907, the appropriation committee presented a substitute bill. This bill, entitled "An act concerning the establishment of free public schools for instruction in the principles and practices of trades," was enacted and became a law as chapter 250 of the Public Acts of 1907.

GEORGIA.

The Georgia Legislature of 1906 passed an act for the organization of 11 district agricultural schools. In the spring of 1907 it was stated that the appropriation for these schools would amount to about $3,000 for each school.

MARYLAND.

The Maryland Legislature of 1908 authorized the governor to appoint a commission to recommend legislation on industrial education. This commission held its meeting of organization at Baltimore on June 20. Dr. Richard Grady, of Annapolis, was appointed as permanent chairman, and Mr. Carroll Edgar, of Elkton, was made secretary. The other members are Howard Melvin, John T. Foley, and Larrie C. Quinn. The commission will make an inquiry into the whole subject of industrial education in Maryland, and make a report upon it. It will examine into the extent to which industrial education is carried on in Maryland and elsewhere.

MICHIGAN.

In the Michigan Legislature of 1907 a bill to provide for the establishment of county schools of agriculture, manual training, and domestic economy was enacted. In substance it authorizes the board of supervisors of any county to appropriate money for the organization, equipment, and maintenance of a county school of agriculture and domestic economy. Two or more counties may unite in establishing such schools. Upon the decision of two-thirds of the board of supervisors to establish such a school the question of establishment shall be put to the vote of the electors of the county.

A separate county school board of five members shall have control of the organization, equipment, and maintenance of such schools. The county commissioner of schools is one of the members, and the other four are to be elected by the board of supervisors for one, two, three, and four years, one old member dropping out and one new being added each year. Where two or more counties combine a portion of the board shall be selected from each county, and necessary levies of money shall be apportioned to each county in proportion to the assessed valuation.

The required courses of study include the soil, plant life, and the animal life of the farm, farm accounts, manual training, and domestic economy. Not less than 10 acres of land must be connected with the school for experiment and demonstration purposes. Tuition is free to inhabitants of the county or counties contributing to the support of the school. Provision is made for the classes for advanced students during the winter months. The superintendent of such a school must be a graduate of a State college of agriculture.

MISSISSIPPI.

The Mississippi Legislature passed an act, which was approved March 21, 1908, authorizing the establishment of a county agriculture high school for white youth in each county, such school to be under a board of five trustees, one of whom shall be the county superintendent of schools, two to be appointed by the board of supervisors, and two by the county school board. A tax not exceeding 2 mills may be levied for the support of the school unless the majority of qualified voters object to such levy. If certain definite provisions regarding the establishment and maintenance of the schools are complied with to the satisfaction of the State board of education, a grant of $1,000 per year may be received from the State.

NEW JERSEY.

In the New Jersey Senate March 10, 1908, there was introduced by Mr. Colby a joint resolution authorizing the governor to appoint a commission to inquire into the subject of industrial education and report thereon to the next legislature. The five persons composing the commission are to serve without compensation, but may employ a secretary and other necessary clerical assistance. The commission's expense must not exceed $5,000.

A bill was introduced in the house March 31, 1908, looking to the establishment of industrial schools in the larger cities of the State. The bill authorized the governor to appoint a commission of five persons, without salary, to consider the advisability of establishing such schools, to be maintained by the State in first and second class cities. This bill was passed by the legislature of 1908.

The commission has reported to the governor, recommending the appointment of a State commission on industrial education, with authority to establish independent industrial schools.

NEW YORK.

A bill for industrial education was signed by Gov. Hughes May 18, 1908. The measure provides for the establishment by local boards of education of general industrial schools, open to pupils who have completed the elementary school course or have attained the age of 14, and of trade schools open to pupils who are 18 years old and have completed either the elementary school course or a course in the industrial school, or who have met such other requirements as the local board may prescribe.

Local authorities are authorized to appoint an advisory board of five members, representing the local trades and industries, two of the members for a term of one year and three for a term of two years, their successors to be appointed

for a full term of two years. These local boards are authorized to employ competent teachers for the trade and industrial schools, to provide proper courses of study, to purchase grounds and lease or construct suitable buildings, and to purchase necessary machinery, tools, apparatus, and supplies. For each independently organized industrial trade school the State is to appropriate $500 each year where one teacher is employed and where there is an enrollment of at least 25 pupils, and an extra $200 for each additional teacher employed exclusively in such schools.

In complying with the requirements of this law a new division in the education department, called the division of trade schools, has been organized, and to it have been assigned the duties incident to the establishment, organization, and management of these factory and trade schools. It is suggested that boards of education advise with local commercial and labor organizations and invite expressions from the press and citizens, and that where a real demand appears for training in general shopwork or in any particular trade steps be taken to meet it. When this time comes at any point in the State the education department, through the chief of the division of trade schools, will be ready to be of service.

On September 10, 1908, the education department of New York State issued a circular announcing that through the organization of a new division of trade schools the education department was prepared to take up the organization of factory and trade schools with local school authorities, commercial or labor organizations, or any other citizens who may be interested.

A circular of information was issued from Albany, N. Y., October 1, 1908, for the purpose of anticipating some of the questions which will arise in reference to the recent law providing for the establishment and maintenance of general industrial and trade schools.

WISCONSIN.

An industrial school bill was enacted by the Wisconsin Assembly of 1907. This act provided that any city or school district in the State of Wisconsin should have the power to establish, conduct, and maintain a school or schools for the purpose of giving practical instruction in trades to persons having reached the age of 16, such schools to form part of the public-school system of such city, and to be under the supervision and control of the respective school boards; but after the establishment of such schools each school board may appoint an advisory committee on trade schools, which shall consist of five citizens not members of the school board, but each of whom is experienced in one or more of the trades taught in the school.

The funds for such industrial schools are to be raised by a tax not exceeding one-half mill on the total assessed valuation of the city. Provision is made for the temporary use of the regular school funds for industrial-school purposes, reimbursement to be made from the industrial-school fund when it shall have become available. A check on the introduction of an industrial school by the school board against the wishes of the community is maintained by the provision that the matter may be submitted to a vote of the electors of the school district upon petition of 20 per cent of the voters at the previous election.

An important provision of this bill is the permission to take over trade schools already established, thus following in the steps of European countries, where in many cases the schools taken over have formed the nucleus for the new State system.

As a result of this law and in accordance with the last-mentioned provision, the Milwaukee School of Trades became the first day trade school to be operated under a State industrial-school law.

MASSACHUSETTS.

Appointed August 31, 1906. Term of office, three years. Section 2 of chapter 505 of the acts of 1905:

"The commission on industrial education shall be charged with the duty of extending the investigation of methods of industrial training and of local needs, and it shall advise and aid in the introduction of industrial education in the independent schools, as hereinafter provided; and it shall provide for lectures on the importance of industrial education and kindred subjects, and visit and report upon all special schools in which such education is carried on. It may initiate and superintend the establishment and maintenance of industrial schools

for boys and girls in various centers of the Commonwealth, with the cooperation and consent of the municipality involved, or the municipalities constituent of any district to be formed by the union of towns and cities as hereinafter provided. The commission shall have all necessary powers in the conduct and maintenance of industrial schools, and money appropriated by the State and municipality for their maintenance shall be expended under its direction."

Section 6 of chapter 505 of the acts of 1906:

"* * * and especially shall the commission consider and report at an early day upon the advisability of establishing one or more technical schools or industrial colleges providing for a three or four years' course for extended training in the working principles of the larger industries of the Commonwealth."

Industrial schools to be provided to which pupils are to be admitted at 14 years of age, the course to be four years, combining technical instruction and practical shopwork.

Evening courses to be provided for men and women already in the trades.

Efforts to be made to establish in the day schools part-time courses for apprentices between the ages of 14 and 18 years.

Agricultural schools to be provided.

Further delegation to the commission of necessary powers in the conduct and maintenance of independent industrial schools.

Moneys appropriated for the maintenance of independent industrial schools, whether appropriated by the State or by municipalities, must be expended under the direction or with the approval of the commission.

Permission extended to any city or town to establish independent industrial schools in charge of a board of trustees, and the empowering of such a board with authority to provide and maintain such schools.

Such schools must be approved by the commission as to location, courses, and methods of instruction, in order to receive State aid, as provided in chapter 505 of the acts of 1906.

The commission may grant permission to any resident of Massachusetts to attend an authorized independent industrial school in any other city or town than that of his residence, provided that his own town does not maintain such a school in whole or in part.

The commission may affix a tuition fee which the home town is required to pay in case of pupils resident in outside towns, the State to repay to the town one-half the tuition fee so paid.

OHIO.

AN ACT To authorize boards of education in cities of the second grade of the first class to levy a tax for certain purposes therein specified, approved March 16, 1909.

Be it enacted by the General Assembly of the State of Ohio:

SECTION 1. Any board of education may establish and maintain manual training, domestic science, and commercial departments, agricultural, industrial, vocational, and trade schools, and kindergartens in connection with the public-school system, and pay the expenses of establishing and maintaining said schools from the public-school funds, in the same manner and from the same funds as other school expenses are paid.

OKLAHOMA STATE COMMISSION FOR AGRICULTURAL AND INDUSTRIAL EDUCATION.

In order to carry out the provisions of the State constitution relating to the teaching of the elements of agriculture, horticulture, stock feeding, and domestic science in the common schools of the State, a "State commission for agricultural and industrial education" was created by the legislature of 1908 (the Franklin act, approved May 20). It consists of the State superintendent of public instruction, chairman, the president of the State board of agriculture, and the president of the agricultural and mechanical college. The commissioners serve without additional pay. An annual report to the Government is required. After July 1, 1909, no person is to be allowed to teach in the public schools of the State who has not passed a satisfactory examination in the elements of agriculture and allied branches, as required by the paragraph cited above. In each of the State normal schools a department to be known as the "department of agricultural and industrial education" is established, and a yearly appropriation of $2,500 ("or as much thereof as may necessary") out of the State treasury is made to each of the State normal schools for the maintenance of this department. The agricultural and mechanical college is designated by

law "the head of the agricultural, industrial, and allied science system of education." The "chair of agriculture for schools" is created in the agricultural and mechanical college. The duty of the incumbent is "to direct and advise in all matters relating to the teaching of agriculture and allied subjects in common schools, under the supervision of the president of the Agricultural and Mechanical College." He is to visit normals, institutes, and public schools, and prepare, print, and distribute such leaflets and other literature as may be helpful to teachers. Graduates of the four-year course in the Agricultural and Mechanical College are granted a permanent teacher's certificate of first grade by the State superintendent of public instruction when applicaion is approved by the commission for agricultural and industrial education.

PROPOSED LEGISLATION.

THE DAVIS BILL.

An extension of the system of Federal aid to industrial education in the direction of greatest present need—i. e., the secondary instruction—is proposed by the Davis bill, now before Congress. Under the head of secondary schools it would provide not only for Federal support to manual training and domestic science in high schools, but also for the similar endowment of industrial and agricultural improvement schools (evening or day). State normal schools would receive Federal aid for the training of teachers of manual training, domestic science, and the elements of agriculture—just as the land-grant colleges now receive Federal aid which may be devoted to departments for the training of teachers of industrial education. The total amount to be appropriated annually, under the terms of the proposed bill, is something over $11,000,000.

NEW JERSEY.

The general supervision and control of public industrial education shall be vested in a commission on industrial education, which shall consist of five citizens of this State, at least three of whom shall be engaged in industrial pursuits. The members of the commission shall be appointed by the governor within 30 days after the approval of this act, and those first appointed shall serve for one, two, three, four, and five years, respectively. The governor shall be ex officio a member of the commission.

Whenever any board of education, school committee, or other like body of any municipality in this State, or the commission on industrial education, shall certify, or shall have heretofore certified, to the governor that a sum of money not less than $1,000 has been contributed by voluntary subscriptions of citizens or otherwise, as hereinafter authorized, for the establishment in any such municipality of a school or schools for industrial education, it shall be the duty of the governor to cause to be drawn, by warrant of the comptroller, by himself, out of any moneys in the State treasury not otherwise appropriated, an amount equal to that contributed to the particular municipality as aforesaid for the said object, and when any such school or schools shall have been established in any municipality as aforesaid there shall be annually contributed thereafter by the State, in manner aforesaid, for the maintenance and support thereof, a sum of money equal to that contributed each year in said municipality for such purpose: *Provided, however*, That the moneys contributed by the State as aforesaid to any municipality shall not exceed the sum of $7,000.

NEW YORK.

[In assembly, Jan. 20, 1909.]

AN ACT To authorize the appointment of a commission to inquire into the educational system of the State as to the establishment of industrial and technical schools.

The people of the State of New York, represented in senate and assembly, do enact as follows:

SECTION 1. Within 30 days after this act takes effect the governor shall appoint a commission consisting of seven persons, to be known as the commission on technical and industrial education, which shall inquire into the educational system relative to the establishment of technical and industrial schools throughout the State.

SEC. 2. The commission shall be charged with the duty of investigating methods of technical and industrial training in the public schools of the United States and foreign countries, with a view to establishing such schools and special courses of study in the public schools of this State. The commission shall submit a report to the legislature of 1910, and shall, in its discretion, make such recommendations as to proper legislation which it may deem advisable.

SEC. 3. Within 10 days after the commission shall have been appointed its members shall meet and organize by the election from their number of a chairman and secretary; and may in and for the performance of its duties employ clerks, stenographers, and other persons as may be deemed necessary, and fix their compensation.

SEC. 4. The sum of $7,500, or so much thereof as may be necessary, is hereby appropriated, out of any moneys of the treasury not otherwise appropriated, to be paid by the State treasurer on the order and warant of the comptroller, to carry out the purpose of this act.

SEC. 5. This act shall take effect immediately.

ILLINOIS.

No legislation has as yet been enacted in Illinois bearing directly upon State industrial education. A communication from the department of public instruction of Illinois, under date of October 5, 1908, states that an education commission has been authorized by the legislature and is now at work on the real organization of the Illinois school system. It is expected that it will bring in a report upon industrial and vocational education.

Industrial school legislation for a special district in the State has been enacted for Chicago, which gives the board of education power to provide for the establishment and maintenance of various kinds of schools, and which includes schools or classes in manual training, constructural and avocational teaching, and domestic arts.

TENNESSEE.

In Memphis, Tenn., a Citizens' Industrial Educational Club has been organized, not only for the purpose of securing local industrial-school facilities, but also for promoting State industrial education legislation. This club, which now numbers several hundred members, called a mass meeting, which was held October 23, 1908, in the assembly hall of the Business Men's Club. At this meeting the mayor of the city, who presided, stated the needs of the city for an industrial school and outlined a brief plan for securing funds to start operations.

A published account of the work in Memphis says: "The work of procuring funds for the industrial school has had an auspicious beginning; as the people of the city are heart and soul in the movement, it is almost certain that the next legislature will provide for the institution."

VERMONT.

Much interest has been aroused in Vermont in the subject of industrial education, and it is expected during the biennial session of the general assembly of the State, which met early in October, some measures relative to industrial education will be passed.

The legislative committee of the Vermont State Grange has recommended that the legislature be urged to pass a law relative to the introduction of agricultural and industrial training in the public schools. This committee recommends the teaching in the public schools of the elements of agricultural science and the gradual introduction of instruction in the common industrial occupations.

OTHER STATES.

The movement toward industrial education has become very active, and similar measures have been introduced in various other States, with a probability of increased interest in the States already mentioned.

A reorganization and centralization of educational interests have been effected in the State of Massachusetts during the year.

A bill to inquire into and effect a reorganization of the system of education of Pennsylvania failed to pass at the last session of the legislature, but it is expected to have greater support during the coming year.

ATTITUDE OF THE EMPLOYERS.

JAMES W. VAN. CLEAVE, EX-PRESIDENT OF THE NATIONAL ASSOCIATION OF MANUFACTURERS, PRESENTS VIEW ON INDUSTRIAL EDUCATION.

I would attach a manual-training department to every primary school in the United States, where, beginning at the age of 9 or 10, under competent teachers, boys could devote an hour a day to the handling of tools. I would make the instruction compulsory. Thus, at the age of 14 the boy of average intelligence and application would be able to use many of the tools employed in those trades which are fundamental and important. Then I would have free industrial high schools where boys who had completed the primary course might continue their education. Two years at such a school would qualify a student to take his place in the world as a first-rate mechanic. The supply of workers being certain and adequate, the labor-union embargo on our industries would soon be permanently lifted.

AMERICAN FOUNDRYMEN'S ASSOCIATION. FROM REPORT OF COMMITTEE ON INDUSTRIAL EDUCATION.

Your committee has considered it a duty to call attention to this social side of the problem of industrial education, because this education involves the question of bread and butter, shelter and clothing, of public peace and order, and the attributes of civilized life for the manufacturer, the business man, and railroad officer as much as it does for the mechanic and laborer. Industrial education, to be of nationally constructive and lasting productive value, must go further than merely trying to serve one particular industry; it must go further than trying to serve the mechanical needs only of all industries; it must try to serve the social needs of society by raising the man and citizen to as high an intellectual standard as we try to raise the mechanic to a higher level of skill. Then the harmonious development of both will produce that degree of industrial intelligence which must give us the fifth essential to successful productivity of capital and labor, viz, health, energy, intelligence, cooperative spirit, and earning capacity.

To attain this end we can have nothing less than a system of industrial continuation schools, branching off from the seventh or eighth grade, serving general industrial purposes up to 16 years of age, and then becoming specified trade schools as instructors to those engaged in trades, similar to what the New York law contemplates. These schools to be supported by both the State and the community, making attendance compulsory up to 15 years of age, and the employer recognizing the increased intelligence by a better wage, which will induce parents to send their children to school instead of to the factory.

THE MACHINE TOOL BUILDERS' ASSOCIATION.

The action of the National Machine Tool Builders' Association in declaring for a double-barreled apprenticeship system is obvious to the casual observer.

"The length of the general apprenticeship is to be three years, the wages paid being 8, 10, and 13 cents per hour. The special apprenticeships are to be shorter and the rates higher. Thus, for turning and planing the course is to cover two years, the rate of wages advancing each six months, and being 12, 14, 16, and 18 cents. For the vertical and horizontal boring mill the term is to be 1½ years, the rate advancing at the end of each six months, and being 15, 17, and 20 cents. In the case of drilling and milling the term is to comprise a single year only.

"This special apprenticeship system has been found feasible to train very efficient men and to largely increase their earning capacity in a brief period of time. Some of those taken in have been beyond the usual age of apprenticeship, the applicants being men of natural ability, but working as laborers only, and a good proportion of them have increased their earning capacity threefold. In other cases it has been possible to obtain farmers' sons who were unable to take the general course because of the lower wages, but who, by reason of the self-sustaining wages offered at the beginning of the special courses, have been able to take those courses and have done so. The report provides for the transfer of an apprentice from the special to the general class, with suitable credit for the time served."

NATIONAL ASSOCIATION OF MANUFACTURERS, REPORT OF COMMITTEE ON INDUSTRIAL EDUCATION.

In a report to the National Association of Manufacturers a committee on industrial education severely arraigns the attitude of labor unions toward the schools. The report said that encouraging progress had been made in establishing industrial institutions throughout the country, but that the unions had made efforts to hinder the perpetuation of the trade school. "Their efforts," the report says, "are nothing short of a crime perpetuated against all those young men who desire to learn a trade and are cause, in a considerable measure, of the lack of skilled labor in the United States."

The problem of teaching boys and girls a trade will probably never be solved by the modern free industrial school quite as satisfactorily as it is solved in the trade school that has been successfully conducted in New York for upward of 15 years as a private enterprise, and where thoroughness is made a condition of graduation and is never lost sight of. The modern apprentice system is generally acknowledged as a failure in that boys who are entered in a trade seldom have the opportunity to become efficient in the time specified as necessary for the apprenticeship term. The skilled workers are kept too busy in the short work day in order to attain the limit of a day's production, and necessarily the boy must be neglected.

Since the existing conditions in the trades will probably be productive of a lack of skilled workers in the United States, it would appear that there is a great opportunity ahead for the industrial school and that a wide discussion of the questions involved may bring about an understanding between the skilled worker and the school graduate which will not be harmful to the former and prove beneficial to the latter.

ABSTRACT FROM INDENTURE USED BY ONE OF THE LARGEST MANUFACTURING CONCERNS IN THE COUNTRY.

The said masters reserving the right to terminate this agreement, if said apprentice shall refuse to obey their proper commands, or shall be found physically unable to attend to his work. During all which time the said apprentice doth convenant and promise that he will serve his masters faithfully, keep their secrets, and obey their lawful commands; that he will do them no damage himself, nor see it done by others without giving them notice thereof; that he will not waste their goods nor lend them unlawfully; that he will not contract matrimony within the said term; that he will not play at cards, dice, or any other unlawful game, whereby his masters may be injured; that he will neither buy nor sell, with his own goods nor the goods of others, without license from his masters; and that he will not absent himself day or night from his masters' service without their leave, nor haunt alehouses, taverns, or playhouses, but in all things behave himself as a faithful apprentice ought to do during the said term. He shall conform to and abide by all rules and regulations now in force and hereinafter adopted by his masters for the government of their apprentices. And the said masters on their part do covenant and promise that they will use the utmost of their endeavors to teach, or cause to be taught or instructed, the said apprentice in the art, trade, or mystery of ———, and he shall receive as compensation, when working, $2 per week.

It appearing upon satisfactory proof furnished to said ——— ——— that said minor has been properly educated in reading, writing, and arithmetic as to render further schooling unnecessary.

And for the true performance of all and singular the covenants and agreements aforesaid, the said parties bind themselves each unto the other firmly by these presents.

This agreement terminated October, 1903. The above agreement is literally and accurately quoted from the original, the name of the firm and of the apprentice, for obvious reasons, being omitted.

NATIONAL EDUCATIONAL ASSOCIATION, BOSTON, 1903.

[From an address of one of Massachusetts' prominent manufacturers and for 25 years a foremost educator.]

* * * * * * *

The specific needs regarding the education and qualifications of workmen are as follows: First, last, and always, we are looking for effective, productive,

profitable skill. The manufacturer will employ the skillful man at good pay, even if he be untidy, coarse, ignorant, profane, and drunk on Sundays. (p. 598.)

* * * * * * *

This brings us to the consideration of education that will, if possible, meet the requirements of the manufacturer—a system which shall retain the excellent features of the various schools referred to and shall give an earnest boy who has completed the grammer grades a good liberal education, and at the same time a thorough training for the trade, from which he can immediately upon graduation earn a good living at journeymen's pay, say $2 a day. (p. 600.)

ABSTRACT FROM SPEECH OF ONE OF THE LARGEST MANUFACTURERS OF THE NEW ENGLAND STATES.

[From Fitchburg Daily Sentinel, January 7, 1907.]

Then Mr. ——— went on to say: "To establish a training shop for apprentices I would incorporate a stock company, with the expectation that the stock would be taken and held by the business men and manufacturers of the city, the capital to be invested in buildings and equipment for a training shop for a considerable number of boys to learn the all-around trades of the machinist, the patternmaker, toolmaker, and molder."

* * * * * * *

"The products of the training shop would be sold in the open market at full prices for such superior machine-shop products."

ATTITUDE OF ORGANIZED LABOR ABROAD.

GREAT BRITAIN.

The trade-union congress, at its 1907 congress of trades, adopted the following resolution:

"This congress urges the organized workers to continue their efforts to secure parliamentary and municipal recognition of the trade-union education policy, which demand as essential to the well-being of our future citizens—

"(1) The State maintenance of school children.

"(2) Scientific physical education, with medical inspection and records of the physical development of all children attending State schools, and skilled medical attendance for any child requiring same.

* * * * * * *

"(4) A national system of education under full popular control, free and secular, from the primary school to the university.

"(5) That secondary and technical education be an essential part of every child's education and secured by such an extension of the scholarship system as will place a maintenance scholarship within the reach of every child, and thus make it possible for all children to be full-time day pupils up to the age of 16.

"(6) That the best intellectual and technical training be provided for the teachers of the children, and that each educational district shall be required to train the number of pupil teachers demanded by local needs, and for this purpose to establish training colleges, preferably in connection with universities or university colleges, the cost of such training to be met by adequate grants from the national exchequer.

"(7) That the cost of education shall be met by grants from the imperial exchequer and by the restoration of misappropriated educational endowments.

"(8) That it be an instruction to the parliamentary committee of the Trades Union Congress to formulate these proposals in a bill to be laid before Parliament during the forthcoming session."

GERMANY.

The chairman of the general commission of trade unions of Germany has kindly furnished much valuable information regarding the development of industrial schools and the benefits to be derived from them by the workingmen of Germany.

It is the belief of those interested in labor organizations that the schools are a great benefit to the working classes and that the greater proportion of the graduates of these schools become members of the several trade unions. They

are considered, too, the very best members of these unions, as well as the most efficient workmen. The union leaders are also loud in their praise of the supervision of the schools, since they are conducted in the interest of the employed as well as of the employer. They are, however, unlike the French schools in so far as advisory and visiting members of trade unions are concerned. In the judgment of trade-union leaders it is entirely unnecessary for them to have such members, as the law regarding courses of study and attendance is very specific and is adhered to in the very strictest way.

BELGIUM.

At a convention of trade-union syndicates from all parts of Belgium, held in Brussels in April, 1907, a committee was appointed to visit and inspect these schools. Upon its report to the convention, resolutions were adopted expressing approval of the institution and the belief that such schools would produce workmen of more intelligence than those trained in the ordinary way, and requesting that they be informed when students were ready to qualify as graduates that they might assist in placing them as apprentices and secure their membership in their unions.

The entire scheme seemed to have made a great impression on the members of the convention, particularly the provisions for the health and comfort of the students and the desire to dignify labor and raise it to a standard never before attempted in Belgium.

FRANCE.

The general secretary of the machinists' union, in speaking of the schools, said:

"There was a time when trade unions were opposed to the schools. That opposition, however, came from a misunderstanding of their intended scope. It has been totally effaced, and now we look upon the schools and instructors as our best friends and the graduates as the greatest assets of our trade-unions, since they enable us to select from our ranks the best artisan obtainable. One is able to get an idea of how much sought after these graduates are when he learns that there are more than 20,000 machinists employed in the construction of high-class automobiles alone in the department of the Seine and many thousands in the construction of locomotives, not to speak of the great numbers engaged in the various other branches of the machine industry of the very highest class.

"For the various schools we appoint members of our organization to act as advisory and visiting members of boards of control; thus we are kept in touch with the school and its work and are bound to keep the standard the very highest."

The general secretary of the printing trades of France said:

"I believe we may be justly proud of our schools of printing, and we have perfect confidence in the ability of the director. Personally, I have given much time to the students and am ever ready to assist in the maintenance of the highest standard of excellence of equipment and instruction. You are aware, no doubt, that the 17 trades comprising the printing industry have in France the foundation for the attainment of the highest intelligence. Thus our schools are called upon to supply the several trades with most efficient artisans, and that they do this we are bound to believe, for we are receiving the best wage and the shortest day of any craft in France.

"As you probably know, we have the best school of printing in existence to-day, with all the modern types of machines and every facility for instruction. There is no doubt that as artisans we compare favorably with those of any other country. We take great pride in assisting the apprentices from these schools, both educationally and industrially."

SWITZERLAND.

Switzerland has started a strategic movement by passing a law compelling every employer of labor who seeks to teach a trade, or accept boys or girls as apprentices, to allow them to attend the day, at least four hours weekly, such schools as will advance or assist them in their chosen profession.

This law was passed in 1906 by a referendum vote of the people of the entire nation, but only after a very spirited special election, in which the law was

favored by the wage workers and opposed by the employers. Of the 100,545 citizens entitled to vote 71,933 took part in the election; and of these, 37,029 voted for the law and 28,110 against it.

The secretary of the typographical association said that the trades-unions were all favorable to the establishment of industrial schools, though there were those who believed that some boys would learn more under a master than in the school.

To reach this position various circumstances have aided which are of general interest, and may serve to show how enthusiastic the Swiss trade-unionists are in the matter of industrial training.

Recognizing the lack of a general system of industrial education, and knowing that they must have schools of their own if they were to compete with the technically educated French and German workmen, they forthwith established such schools and supported them out of their own funds; and so well did they perform their task that at present the printers, painters, shoemakers, and tailors are receiving a cantonal subvention to assist in carrying on the schools.

IRISH TRADE-UNION CONGRESS.

TECHNICAL TRAINING OF APPRENTICES.

This congress of Irish workers declares that the time at the disposal of apprentices for acquiring a thorough technical knowledge of their respective trades is at present entirely inadequate, and urges upon employers the desirability of granting further opportunities by allowing their apprentices a few hours' leave upon such days as they undertake to attend the technical schools, so as to enable them to become more proficient workmen; that the department of technical instruction for Ireland be requested to press this matter upon local technical committees and employers' associations throughout the country.

TECHNICAL EDUCATION, TRADES CLASSES.

That this congress condemns the system that prevails in the technical schools of this country in accepting as pupils in the various trades classes and workshops persons who are not tradesmen or apprentices—to the detriment and injury of legitimate and qualified tradesmen; and that this congress is of opinion that the teaching imparted in those trade classes and shops should be confined to tradesmen and apprentices, and calls upon the governors of the technical schools to see that only tradesmen or apprentices to the various trades receive tuition or be permitted to attend lectures in those trades classes and shops.

AT HOME.

ECONOMIC PROGRAM.

Economic program adopted at the Minneapolis convention of the American Federation of Labor in 1908:

The aims, desires, and aspirations of the trade-unionists comprise all that is necessary or possible to the well-being of the human family, and in the pursuit of accomplishment of which we cheerfully accept and, in fact, desire all the assistance which can be given our movement by all forces which stand for the betterment of mankind. * * *

In furtherance of our claim, namely, that our principles comprise the fullest and highest scope of human activity, and from time to time will be enhanced and advanced in accordance with the demands to satisfy human needs and desires, we recommend the following as a partial statement at this time of the economic demands of the American Federation of Labor:

Free schools, free textbooks, and compulsory education.

A thorough education of the workers in all lines of learning, including technology. * * *

Delegate Russell, for the committee on education, presented the following:

NORFOLK, VA., *November 20, 1907.*

To the officers and members of the twenty-seventh annual convention of the American Federation of Labor:

Your committee on education respectfully presents the following: Resolution No. 147, by Delegates John Golden and James Whitehurst, of the United Textile

Workers of America, which is herewith subjoined, was referred to your committee for action thereon. The resolution follows:

Whereas an organization has been formed known as a National Society for the Promotion of Industrial Education, having for its object the raising of the standard of education along industrial lines; and

Whereas some misapprehension exists in many quarters as to the attitude of organized labor upon this subject: Be it, therefore,

Resolved, That this, the twenty-seventh annual convention of the American Federation of Labor, having in mind the experience of many of our national unions with the so-called trade school, which attempted to teach a short cut to trade and which, on some occasions, was used as a weapon against the trade-union movement, do not favor any movement having this ulterior object in view; and be it further

Resolved, That we indorse any policy or any society or association having for its object the raising of the standard of industrial education and the teaching of the higher technique of our various industries.

The foregoing resolution was probably inspired by the address delivered by Mr. C. R. Richards, secretary of the National Society for the Promotion of Industrial Education, during the morning session of the second day of the present convention, a verbatim copy of which was furnished by the stenographer to your committee for its guidance, the same receiving careful consideration by the committee.

Mr. Charles H. Winslow, organized labor's representative on the Massachusetts Commission on Industrial Education, as well as Delegates Driscoll and Cohen, spoke before the committee on different phases of the subject.

Mr. Winslow, who twice addressed your committee, imparted valuable information as to the present status and future prospects of industrial education in his own and other States, giving also the results of his personal, first-hand studies of the industrial schools of Europe.

After an exhaustive, impartial discussion your committee decided to record itself in favor of the best opportunities for the most complete industrial and technical education obtainable for prospective applicants for admission into the skilled crafts of this country, particularly as regards the full possibilities of such crafts, to the end that such applicants be fitted not only for all usual requirements but also for the highest supervisory duties, responsibilities, and rewards; and your committee recommends that the executive council give this subject its early and deep consideration, examining established and proposed industrial school systems, so that it may be in a position to inform the American Federation of Labor what, in the council's opinion, would be the wisest course for organized labor to pursue in connection therewith.

A motion was made and seconded that the report of the committee be concurred in.

The question was discussed by Delegates Driscoll and Golden.

The motion to concur in the report of the committee was carried.

[Extract from report of proceedings, American Federation of Labor.]

Extract from report of proceedings of the twenty-eighth annual convention of the American Federation of Labor, held at Denver, November 9–21, 1908:

The committee reported as follows on that portion of the report of the executive council under the caption of "Industrial education."

INDUSTRIAL EDUCATION.

We note with satisfaction the splendid progress accomplished by the executive council along the lines of industrial education, carrying out the instruction of the Norfolk convention. Much data and material have been brought to hand and referred to your committee. But your committee feels that in no sense, with the limited time allotted them, can they make a complete report on the value of the mass of material referred to them on this subject, and we can best submit our recommendations in the following resolution:

Whereas industrial education is necessary and inevitable for the progress of an industrial people; and

Whereas there are two groups with opposite methods, and seeking antagonistic ends, now advocating industrial education in the United States; and

Whereas one of these groups is largely composed of the nonunion employers of the country, who advance industrial education as a special privilege under conditions that educate the student or apprentice to nonunion sympathies and prepare him as a skilled worker for scab labor and strike-breaking purposes, thus using the children of the workers against the interests of their organized fathers and brothers in the various crafts; and

Whereas this group also favors the training of the student or apprentice for skill in only one industrial process, thus making the graduate a skilled worker in only a very limited sense and rendering him entirely helpless if lack of employment comes in his single subdivision of a craft; and

Whereas the other group is composed of great educators, enlightened representatives of organized labor and persons engaged in genuine social service, who advocate industrial education as a common right to be open to all children on equal terms to be provided by general taxation and kept under the control of the whole people with a method or system of education that will make the apprentice or graduate a skilled craftsman in all the branches of his trade; and

Whereas organized labor has the largest personal and the highest public interest in the subject of industrial education, and should enlist its ablest and best men in behalf of the best system, under conditions that will promote the interests of the workers and the general welfare: Now, therefore, be it

Resolved, That the president, inconjunction with the Executive Council of the American Federation of Labor, be, and is hereby, authorized to appoint a special committee of at least fifteen, to be composed of a majority of trade-union members of this convention, who will serve without compensation and incur no expenses other than necessary and legitimate expenditure within the judgment of the president and executive council, to investigate the methods and means of industrial education in this country and abroad, and to report its findings, conclusions, and recommendations to the next annual meeting of the American Federation of Labor.

A motion was made and seconded that the recommendation of the committee be adopted.

SUPPLEMENTAL TRADE EDUCATION.

The Hot Springs convention of the International Typographical Union adopted the following resolutions:

Whereas it is becoming more apparent, year after year, that the apprentices in printing offices are being restricted in opportunities to learn the trade in its principal branches, thereby minimizing their value as journeymen, and realizing the tendencies of foremen, as a rule, to make specialists of the apprentices: Therefore be it

Resolved That the executive council of the International Typographical Union is hereby instructed to appoint a commission of three, whose duty it shall be to formulate some system for the technical education of our members and apprentices, and that this commission be not restricted in its efforts in this direction; and, further

Resolved, That the executive council is hereby authorized to expend such sum of money as in its judgment may be deemed necessary to defray the expense of said commission.

Resolved, That said commission report the result of its work to the next convention of the International Typographical Union.

The commission decided upon a correspondence course, and in doing so determined that the lessons should be sufficiently comprehensive to embrace subjects that can not now be learned in printing offices. That is, the student should be taught the principles of the printing art in such a way as would enable him to master the principles pertaining to harmonious color and type arrangement. This will widen the field for printed matter, creating a demand for labor, and assist printers who desire to take up designing or the development of advertising ideas.

In order that the tutors should be of the best, the union has made arrangements to assume control of the experts attached to the Inland Printer Technical School. There is no cavil as to the excellence of this institution; under union auspices it has in the last few years graduated more than one thousand machine operators, and the thoroughness and completeness of its instruction in this and other branches, as well as its success, have won the unstinted praise of trade educators.

ELECTROTYPERS AND STEREOTYPERS.

Executive board recommendations adopted by the convention, 1908:

In line with the tendency of the day and for the purpose of more nearly accomplishing those ends for which trade-unions are organized, i. e., make highly skilled, competent mechanics, that they may thereby raise the standard of living, it is deemed by the executive board a favorable time to call to the attention of the convention the question of technical education in our crafts.

No one who wishes to be informed relative to the trade-union movement can ignore the agitation for industrial trade schools and other means of educating the youth in a thorough knowledge of some craft or calling.

The evolution in industry has so specialized the work of all trades that apprentices no longer are able to obtain that general knowledge and understanding of their work which creates initiative or interest in it. Everyone knows that toil loses much of its wearisomeness if an interest in the work can be aroused in the one performing it. If one is not acquainted with the reasons for a thing and the relative merits of several processes of doing it, his interest is not stimulated to any appreciable extent.

If the trade-unions do not rise equal to the needs of the day and by some method train their members thoroughly in the theoretical and technical parts of the crafts, some other interests less friendly to the workers will surely give this instruction, for no American can believe that the workers of this continent will ever be permitted to fall below the best standard existing in the world.

These reflections have caused the executive board to recommend as a first step that each local union appoint a committee of its best-informed artisans to study this subject and train and instruct the apprentices within its jurisdiction and report the results to the next convention for its consideration.

Out of these experiments will come a practical, effective, and natural system, wherefrom each apprentice will be developed into a thorough technician and mechanic, to the honor and strength of our craft organization.

INTERNATIONAL PHOTO-ENGRAVERS OF NORTH AMERICA.

The action of the International Photo-Engravers' Union of North America, at its Milwaukee convention, September 7–11, 1909, authorizes the executive council to submit a practical plan of technical education or trade training to our membership during the coming year. The matter of establishing a system whereby our members might participate in the benefits accruing from a course of technical training has occupied the favorable attention of three of our recent conventions. We hope to see such a system put into effect the coming year.

LOUIS SCHWARZ, *Secretary.*

PRINTING PRESSMEN AND ASSISTANTS' UNION.

The International Printing Pressmen and Assistants' Union of North America adopted the following in 1909:

"That the president be instructed to appoint a committee of five, representing the different classes of our business, for the purpose of taking the question of technical education up and devising some plan whereby this work can be inaugurated on a basis of practicability. If after a careful study of this question the committee is of the opinion that the work can not be carried on without expense to the International Union, their plan in concrete form shall be referred to the referendum. We further recommend that the board of directors act in conjunction with the committee appointed by the president."

OPERATIVE PLASTERERS.

[Proceedings of International Convention of Operative Plasterers' International Association of 1908.]

The committee reported that it was in hearty accord with the trade school, when run and controlled by the Operative Plasterers' International Association for the advancement of our members and apprentices.

The committee quoted as follows from the president's report:

"No doubt the trade school, if properly conducted, would do great good. I feel it is a waste of energy to teach boys a trade who never intend to follow

it. The trade school, to be successful, must have the cooperation of the journeyman to insure its success. Without this cooperation they are failures. Were trade schools confined to advancing the apprentices who are regularly employed by the various employers they would no doubt be filling a long-felt want and directing their labors in the right channel. Each and every boy who starts to learn a trade with an employer has a desire to become a thorough mechanic. But it must be acknowledged that few of them receive the opportunity, as a great number of our employers are not in a position to teach a boy a trade properly. It is in cases of this kind that the trade school would prove advantageous, as the boys could attend the school in the evenings and be taught the scientific principles involved in the trade, the nature of materials, etc. A practical mechanic should be employed to teach the boys in ornamental work. I feel that a trade school conducted along these lines should be encouraged, and trade-unions should even contribute to their support."

INTERNATIONAL GRANITE CUTTERS.

This association is in favor of public industrial education, and encourages technical education of its members and apprentices, including drawing, modeling, and the teaching of English.

JAMES DUNCAN, *Secretary-Treasurer.*

UNITED TEXTILE WORKERS OF AMERICA.

This organization has for many years indorsed the textile schools that are under the joint control of the State and municipality, and furthermore indorse all forms of industrial education properly safeguarded as above.

JOHN GOLDEN,
President United Textile Workers of America.

INTERNATIONAL HORSESHOERS' UNION.

This organization is on record for the past 15 years as indorsing the technical training of its members, and has advocated and obtained legislation, both Federal and State, looking toward the technical education of its members.

ROADY KENEHAN, *Secretary-Treasurer.*

INTERNATIONAL MOLDERS' UNION.

Whereas believing that the best interests of our craft lie in promoting the education of apprentices and in inducing them to acquire a thorough technical knowledge of their trade, including a knowledge of mechanical drawing: Therefore be it

Resolved, That we hereby recommend all local unions to take such steps, wherever practicable, as will enable the apprentice to take a course in this study, and, as a further inducement, to pay a reasonable tuition fee for him where such tuition can not be obtained free.

Resolved, That we approve of the system of placing apprentices to work among the journeymen molders in preference to that of placing them together under an instructor.

BOOT AND SHOE WORKERS' UNION.

Resolution adopted by the convention, June, 1909:

That a committee be appointed to thoroughly investigate the question of trade schools and publish their report in the Journal.

A committee of three was appointed and is now undertaking the investigation.

PATTERN MAKERS' LEAGUE OF NORTH AMERICA.

The Pattern Makers' League of North America adopted the following at the 1909 convention:

All apprentices to the trade of pattern making shall be at least 16 years of age. During such apprenticeship he shall attend a school teaching technical courses such as will fit him to become a practical and competent journeyman (such

school to be approved by the association). The apprentice must graduate in such studies before the expiration of the apprenticeship in order to be recognized as a journeyman.

CARPENTERS' APPRENTICES.

Apprentice rules adopted by the joint arbitration board of the Carpenters and Builders' Association and the Carpenters' Executive Council of Chicago and Cook County:

The contractor taking an apprentice shall engage to keep him at work in the trade for nine consecutive months in each year and see that during the remaining three months of the year the apprentice attends school during January, February, and March, and a certificate of attendance from the principal of the school attended will be accepted by the joint arbitration board as a compliance with this requirement before he is allowed to work during the coming year.

A contractor taking an apprentice shall keep him steadily at work or school; failing to do so, he shall pay him the same as though he had worked for him.

In case an apprentice at the end of his term of four years, for want of proper instruction in his trade, is not a proficient workman, and if, after a thorough investigation, the joint arbitration board finds that the contractor to whom he was apprenticed did not give him proper instruction and an opportunity to learn his trade, he may be required to serve another year, with whom he and the joint arbitration board may determine, and at the rate of wages (less than the minimum) in his trade they may determine, and the difference between said rate and the minimum scale in his trade shall be paid through the joint arbitration board.

JOURNEYMEN TAILORS' UNION.

From report of General Secretary John B. Lennon to the convention of the Journeymen Tailors' Union of America, held at Buffalo, N. Y., August, 1909. approved by convention:

"To all the people, and especially to those who are engaged in mechanical occupations, the subject of industrial education, which is now so strongly before the student world and the economists, is a question of first importance. The old-time method of apprenticeship in all the crafts has disappeared, or very nearly so, and there is apparently no possibility of its being resurrected. The world moves too fast nowadays to warrant the spending of from 4 to 10 years to learn a trade. We are as much interested in this subject as any other craft, perhaps more. There are a few apprentices or helpers that are learning our trade in any part of the world. And if the trade is to be perpetuated proficiency in it will have to be learned by some other method than that of apprenticeship. And it seems to me that the only feasible system is that which is known as industrial education. The craftsmen of the world have looked upon this innovation with great disfavor and have exerted a very considerable influence against its introduction to any extent. But the time is near at hand when successful opposition will be absolutely impossible. And it appears to me that the trade-union movement should become a positive and aggressive factor upon this subject of industrial education, insisting that it be practical; that it turn out high-class mechanics, not only with their brain developed but their fingers as well. We need have no fear of industrial education if intelligent, high-class mechanics are produced. A tailor needs to know the philosophy of his trade and the history of it. He needs to have a business education, and if that can be had at the same time that he is securing his mechanical education it certainly will be an advantage to the tailors of the future; and what it seems to me we should stand for is that industrial education in our school system in some way, shape, or manner shall be practically effective so as not to be a weapon to pull down the working class, but should be a means of upbuilding because of the high grade of people turned out."

INTERNATIONAL ASSOCIATION OF MACHINISTS.

Taken from international president's report, International Association of Machinists' convention, September, 1909:

As no two children are alike in constitution or temperament, education becomes an individual task. What might suit one might not suit another. A

curriculum that would be adequate and desirable in one instance might be entirely out of place in many others, which gives rise to a great diversity of opinion as to the best means to be employed for the proper education of the rising generation.

Any plan that would propose a complete education by extraneous means is doomed to failure because of the vast difference that exists between individual children. Ability and inclination are important factors. Remembering this, parents and tutors must exercise great care and discrimination in working out the task of forming a citizen. After the schools have done all that is possible in a preliminary way, the real work begins to properly qualify and equip the coming citizen with all that is necessary to enable him to earn a living and shoulder the social responsibilities that come with mature manhood. There must be no short cut to this or any royal road that would pretend to give this power without training and the hard work it entails. We prize most those things for which we work most or for which we sacrifice most.

Industrial schools and kindred establishments making claims of ability to instruct the rising generation in all details necessary to fully equip a practical machinist so that he can hold his own and command the average pay of a journeyman in less time and with less practice than it is done in the machine shop are claiming more than can be accomplished. In theory their claims may work out most satisfactorily, but when it comes to a practical test they are of no greater value than any other dilettante's dream.

The workshop is the only place where an education can be gained that is practical and thorough, calculated to fill all the requirements that go to make up a full-fledged mechanic. The industrial school merely supplies a veneer of education which can never compete with the solid practicability of the education acquired in the factory. Its well-rounded thoroughness comes from observation, from intuition, from absorption and the all-round hard work that comes with every-day application. It can never be acquired elsewhere nor gained in any other way than in the hard school of factory experience. The factory workshop can be depended upon for practical results in the matter of supplying fully equipped mechanics, which can never be expected from the industrial school as long as it is depended upon for it by itself alone.

Industrial education is one of the live, burning questions of the day. Schools are being rapidly established in many parts of the country and large sums of money raised through public and private sources to encourage, maintain, and foster the same.

The trade-union movement is intensely interested, because it strikes at the very foundation of that movement. It means the life of the apprenticeship system, as established by trades organizations, if allowed to run wild, as is the case at the present time.

The machinist trade has been singled out by industrial schools, and every school established to date has attempted to teach our trade to boys during periods ranging from six months to two years.

The following resolution was adopted by the convention:

Whereas the report of the international president calls attention to the threatened danger to our apprenticeship system by the trade schools of the country, which issue certificates to the students as graduates in the several trades; and

Whereas such so-called graduates of trade schools are frequently used by employers to prevent men gaining a higher wage rate or shorter hours: Therefore be it

Resolved, That the attention of our membership be called to this growing evil, and urged to refuse to assist such so-called machinists who may be engaged as "improvers" or "men under instructions" in acquiring a more enlarged knowledge of the business.

RESULTS OF A RECENT INVESTIGATION BY THE DEPARTMENT OF LABOR OF NEW YORK STATE.

The replies of secretaries of the labor unions of the State to the question: "Do you favor a public industrial or preparatory trade school, which should endeavor to reach boys and girls between 14 and 16, that now leave the common school in very large numbers before graduation? Such a school would not

teach a trade, but would give a wide acquaintance with materials and fundamental industrial processes, together with drawing and shop mathematics, with the object of giving a better preparation for entering the industries at 16 and better opportunities for subsequent advancement," are as follows:

Groups of trades.	Number answering—		Qualified—		Not answering.	Total unions.
	Yes.	No.	Yes.	No.		
Building, stone work, etc	456	148	8	1	130	743
Transportation	265	23	2	.....	88	378
Clothing and textiles	117	23	2	1	31	174
Metals, machinery, shipbuilding	165	49	5	.....	69	288
Printing, binding, etc	56	26	2	2	29	115
Wood working and furniture	52	15	.....	.....	21	88
Food and liquors	67	11	.....	.....	38	116
Theaters and music	31	4	.....	1	27	63
Tobacco	34	12	3	.....	16	65
Restaurants, trade, etc	88	22	1	.....	24	135
Public employment	77	.....	.....	.....	48	125
Stationary engine men	44	7	.....	.....	18	69
Miscellaneous	48	9	.....	.....	35	92
Total	1,500	349	23	5	574	2,451

The returns from labor union officers in answer to the question: "Do you favor public trade schools for boys and girls between 16 and 18, that would give two years of practical training, together with drawing and mathematics, provided the graduates of such schools should serve two years more as apprentices or improvers?" as given below will undoubtedly prove of much interest:

Groups of trades.	Number answering—		Qualified—		Not answering.	Total unions.
	Yes.	No.	Yes.	No.		
Building, stone work, etc	348	238	32	1	124	743
Transportation	233	44	6	.....	95	378
Clothing and textiles	107	32	4	.....	31	174
Metals, machinery, shipbuilding	109	96	15	1	67	288
Printing, binding, etc	33	41	5	4	32	115
Wood working and furniture	43	21	1	1	22	88
Food and liquors	62	17	1	.....	36	116
Theaters and music	33	1	.....	.....	29	65
Tobacco	26	21	3	.....	15	63
Restaurants, trade, etc	78	31	1	.....	25	135
Public employment	75	4	1	.....	45	125
Stationary engine men	42	9	2	.....	16	69
Miscellaneous	43	12	.....	.....	37	92
Total	1,232	567	71	7	574	2,451

COMMITTEE ON EDUCATION APPOINTED BY PRESIDENT GOMPERS AT THE TORONTO CONVENTION OF THE AMERICAN FEDRATION OF LABOR.

Joseph F. Valentine, chairman, president International Molders' Union of North America.

G. W. Savage, secretary, secretary District 6, United Mine Workers of America.

Victor A. Olander, second vice president International Seamen's Union of America.

Edward B. Goltra, president National Federation of Post-Office Clerks.

James J. Freel, president International Stereotypers' and Electrotypers' Union of North America.

William J. Tracy, business agent Philadelphia plumbers.

P. F. Richardson, president International Association of Car Workers.
Miss Sadie Spraggon, Boot and Shoe Workers' Union, St. Louis, Mo.
John T. Butler, general organizer, International Association of Bridge and Structural Iron Workers.
Ernest Bohm, secretary Central Federated Union, New York City.
Samuel Botterill, United Brotherhood of Carpenters and Joiners of America.
Hugo Miller, second vice president International Typographical Union.
Frank Butterworth, president International Brick, Tile, and Terra Cotta Workers' Alliance.
Thomas P. Menton, deputy factory inspector, Topeka, Kans.
C. W. Fear, editor Missouri Trades Unionist.

APPENDIX.

FORT COLLINS, COLO., *April 24.*

Congressman W. B. WILSON,
House of Representatives, Washington, D. C.:

Farmers' organizations, chambers of commerce, and all interested in rural development in Colorado believe that the passage of the Page-Wilson bill is of vital importance to this State, where agricultural methods are highly specialized and where all sections are continually in need of expert advice.

C. P. H. GILLETTE,
Director of Experiment Station.

FORT COLLINS, COLO., *April 23, 1912.*

Congressman W. B. WILSON,
Chairman Committee on Labor, Washington, D. C.:

Impossible to be at hearing on vocational education bill. People of Colorado are strongly in favor of this measure. It has indorsement of tradesmen, mechanics, farmers, and educators of State. We hope it becomes a law. We know it will do a world of good for industrial education.

CHAS. A. LORY,
President State College of Agriculture.

SOUTHERN COMMERCIAL CONGRESS,
Washington, D. C., April 13, 1912.

Hon. W. B. WILSON,
Chairman Committee on Labor,
House Office Building, Washington, D. C.

MY DEAR SIR: I thank you for yours of the 10th forwarding copy of H. R. 21490. I am in entire sympathy with its provisions and trust that the hearing of the 23d will produce splendid effect.

Yours, very truly,

G. GROSVENOR DAWE,
Managing Director.

GAINESVILLE, FLA., *April 24.*

Congressman WILSON,
House Agricultural Committee, Washington, D. C.:

Senate Page education bill carefully studied. Best measure ever before Congress looking to the amelioration of conditions among masses. I predict, if it becomes a law, the most beneficial economic and social results. Comprehensive and workable. Meets our need.

J. J. VERNON,
Dean State College of Agriculture.

NATIONAL GRANGE, PATRONS OF HUSBANDRY,
Peoria, Ill., April 19, 1912.

W. B. WILSON, *Washington, D. C.*

MY DEAR SIR: Your letter informing me of the hearing on the "vocational educational" bill received.

I have requested the other two members of the committee, T. C. Atkeson, of West Virginia, and N. P. Hull, of Michigan, to be present and give such assist-

ance as they can favoring the measure. I am very sorry that previous grange arrangements will make it impossible for me to attend, but you will find in these gentlemen good workers for the cause. I have also requested Prof. Patterson, of the Agricultural College of Maryland and master of the Maryland State grange, to be present. Please recognize him as one of our committee.

Thanking you for the information and assuring you that the grange stands ready to assist in any legislation which is for the good of the mass of the people, I am,

Very truly,

OLIVER WILSON,
Master of National Grange.

AMES, IOWA, *April 24, 1912.*

Hon. W. B. WILSON, *Washington, D. C.:*

All here favor Page-Wilson bill. Will help.

E. W. STANTON,
Acting President Iowa State College of Agriculture.

AMES, IOWA, *April 24, 1912.*

Hon. WM. B. WILSON,
House of Representatives, Washington, D. C.:

I am heartily in favor of the Page-Wilson bill. It is the most important educational measure that has been before Congress since the passage of the Morrill Act creating the land-grant colleges. It is the most important legislation that can be passed by the present Congress, and all interests should unite in its support.

C. F. CURTISS,
Dean of Agriculture, Iowa State College.

IOWA STATE COLLEGE,
Ames, Iowa, April 15, 1912.

MY DEAR SIR: I have your esteemed favor of the 10th instant and a copy of your bill, H. R. 21490. I am inclosing herewith a copy of a letter that I have just written to Congressman Haugen, a member of the agricultural committee of this State, in reply to his inquiry concerning the features covered by the Lever bill and by the Page-Wilson bill. This will make clear my position in the matter. I am heartily in favor of a broad comprehensive plan that will reach the vital elements of this problem, and I feel that that can only be done by some such measure as you have introduced in the Senate. I also wish to make it clear that I am supporting the Lever bill and am in sympathy with the provisions of that bill so far as it goes.

Very truly, yours, C. F. CURTISS.

Hon. W. B. WILSON,
House of Representatives, Washington, D. C.

APRIL 15, 1912.

MY DEAR MR. HAUGEN: I have your esteemed favor of the 10th instant. The copy of the Lever bill as it was recommended by the House committee was duly received. It is hardly necessary for me to say that I am entirely in accord with that bill. The amendment added by the committee providing that 75 per cent of the funds be used for demonstration work will not be in any way objectionable to States like Iowa and other States that have extension departments already established and have additional State funds. It occurs to me, however, that this restriction might possibly work to the detriment of some States where the extension work is new and where they have no funds except that provided by the initial appropriation of this bill.

While the provision made for extension work by the Lever bill will undoubtedly be of great service to the agricultural interests of the United States, I nevertheless feel free to say that the bill does not reach far enough to do what ought to be done for agricultural and industrial education in America by the Federal Government. This bill seeks to help the adult farmer in the practical problems of his farm work. It makes no provision for the training and future efficiency and usefulness of his boys and girls for the industrial work of the various cities, villages, and the country. We must look for the

real and susbtantial progress in these lines to the training of our youth, and thereby lay the foundation for the industrial work that can come in no other way. Our public school system, particularly in the rural schools, is sadly inadequate. We can not expect to hold our place among the industrial nations of the world unless we make general provision for industrial training, including agriculture and home economics, in the public schools of the United States. A Federal appropriation for this work, outlining a definite policy would do for the secondary educational work in agriculture and mechanic arts what the Morrill Act creating the agricultural colleges did for higher education in this field. The Morrill Act has resulted in laying a broad foundation and training the teachers and leaders for this work that are now in a position to carry on and to extend the benefits to the masses of the people.

The Page and Wilson bills are broad enough and comprehensive enough to reach this whole problem, including the extension work, and I sincerely hope that Congress will take favorable action along this line. I realize that the amount provided for in these bills looks like a large sum of money, particularly in a year when presidential politics is on the boards. I wish merely to call your attention to the very small percentage of Federal appropriations made for the benefit of agriculture and the industries. This is an appropriation that will increase the prosperity and resources of our country. It will benefit the masses of the people in a way that has never been done by any other appropriation made by Congress. Viewed merely from the standpoint of good politics I beg to suggest that there is no more popular measure that can be passed by this session of Congress.

I wish to express my appreciation of the interest you are taking in this measure and the active support that you are giving it.

With high regard, I am

Very truly, yours, C. F. CURTISS.

Hon. G. N. HAUGEN,
House of Representatives, Washington, D. C.

IOWA STATE COLLEGE, *Ames, Iowa, April 22, 1912.*

The COMMITTEE ON AGRICULTURE,
House of Representatives, United States.

The next step in solving the greater problems of this country is the increasing of industrial efficiency in a way which will affect economic and social conditions to such extent that the great industries of our country will be supported by the skilled labor and intellectual development necessary to produce a high quality of product at a cost in production which will build up the industries and provide profitable employment to the great body of wage earners and home makers.

Industrial efficiency in the manual arts, agriculture, and home economics will never become the general possession of the great body of the American people until general provision is made for vocational training.

The comparatively few men and women who will leave their home communities and their work to secure training in industrial work will never bring industrial efficiency to the great body of any people. Training in industral lines must be brought into the homes of the people and it must be brought to the children in these homes.

The public schools is the one great medium through which we may reach all the people, and reach them in an effective way. That which becomes a part of the education of all the children is the factor which is to make our country industrially, socially, and economically what it is to be.

Our State schools of agriculture, mechanic arts, and home economics are in position to train leaders in these respective fields, but there must be provision through which these leaders may reach out into the public schools and the homes of all the people.

H. R. No. 21490 is a comprehensive measure which calls for the most needed provision for extending such training to a sufficient number of people that the youth of the land may be successfuly reached through the public schools.

Financial encouragement by the National Government will bring from the States such support that our Nation will soon be training a rising generation which will match in industrial efficiency that of older countries which have learned to know the value of such training as a national necessity.

The provisions of this bill put into operation will solve more completely than any other agency within our power of promulgation the question of redirecting education into lines of efficiency and general culture which will give us skillful hands, keener intellects, and higher ideals of social fitness; all of which will result in the highest type of citizenship training.

This bill is one on which all those citizens who are interested in general education in the industries and in the greater socal welfare of our country can unite with a devotion that will not tire until the provision has been met.

H. R. No. 21490 provides for the proper encouragement and assistance to each of the lines of industrial education in agriculture, home economics, and manual training in a way which will bring the greatest amount and degree in results at a minimum expenditure of funds by the National Government, the State, and the local communities.

It is the best solution ever yet proposed to bring the degree of industrial and social efficiency our country now so strongly demands.

E. C. BISHOP,
Member Executive Committee,
National Committee on Agricultural Education.

NATIONAL COMMITTEE ON AGRICULTURAL EDUCATION.

[Homer H. Seerley, Iowa State Normal College, chairman, Cedar Falls, Iowa; E. E. Balcomb, secretary, Greensboro, N. C.]

The COMMITTEE ON AGRICULTURE,
House of Representatives, United States:

The most important movement in all popular education is represented by H. R. 21490. It is a measure that will do more to increase the capability and the prosperity of the people as a whole than any other undertaking that can be inaugurated. Vocational education must become a universal part of all popular education if the success of educational efforts is to reach those most needing it—the industrial classes. This bill goes to the heart of the matter when it proposes to give instruction to teachers and in addition proposes to require such instruction in all secondary schools, because such a system of subsidy is equivalent to making a legal requirement. The indirect way here used of assisting the States, that will adopt and introduce such system of instruction, is the strongest plan that can be devised to hasten progress this generation. It is necessary to realize that popular education with all its success is not yet equivalent to what the present progress in other lines demands. It is further necessary to realize that the only plan to do this work in a lasting way is to make it effective with the children and the teachers now in the schools. With this backing of the Government, the States would at once become interested and would make special appropriations of an equivalent character to enable the work to be further enlarged, while the local school districts would also exert themselves to provide additional contributions which will make progress still more decided and certain. The problem of training and equipping the masses for efficiency is the great question of the Nation as well as of the States. It will not do to say that the Nation can afford to consider such a problem as of too little importance to destroy the prominent attention that the passing of such a bill would give; but it must be said that every other first-class nation in the world has found it necessary to do something equivalent in order to keep its people in the forefront of prosperity and success. The United States has postponed such cooperation too long for the public welfare, but it is not too late to see the situation and take a hand in making amends by granting a relief that guarantees its people to be actual competitors with the peoples of other nations.

There is another side to this problem that deserves actual consideration. The more practically schooled foreigners are now able to come to the United States and surpass the native in almost all vocational lines. They are the better mechanics, the better gardeners. the better artizans, and the better farmers than are those who have been given the limited instruction our educational systems permit. This situation is hardly fair to the native born and must not be allowed to continue if the child born in the United States is to be subordinated through lack of proper instruction and training. There are plenty of communities in this country where all the expert workmen were born across the sea and where the native is lacking in capability and initiative to fully make a place for him-

self in society and in business. As a consequence the native is being driven into a position as to occupation that ought not to continue.

In addition it must be recognized that universal instruction in vocational lines is important for the rich as for the poor, because a child born into an American home may be naturally qualified for activity in the industrial vocations and not be naturally qualified to follow the vocation of his predecessors in the family. Without this vocational training his career is certain to be handicapped by his limitations, and he is discredited in the community where he was born and educated. This situation is particularly found among the children of the financially independent and those notable for initiative and personal success, while the chance to enter remunerative industry is practically impossible because of the organized condition in which industrial occupations exists. This generation should be judged more by what its children can do than by what its men and women can do, as it is but a few years until the young people must be in actual charge of the affairs of business, of enterprses, as well as of State.

The helplessness of many of the American population is not entirely appreciated by many of our public men. They are not thrown into contact with them enough to know what it is going to mean to have such a large percentage of people that have no definite occupation and training and are subject to orders from others while they work at the very lowest wage because of incompetence in personal qualifications. A proper education would relieve this situation. There is no reason why human labor should be cheaper than machine labor, and yet this is true when all a man has to give is his muscular strength and his physical endurance. The education of the mind and the hand together is of supreme importance because the mind is able to greatly increase the value of the products of the hand and thus enable a man to occupy a place of greater usefulness and of greater remuneration if he trained at the proper time and in a proper way. Many years of educational administration and supervision has shown me that the greater things that contribute to happiness and prosperity among the people are those that are connected with vocational capability. It is for these reasons that anyone interested in public welfare and future improvement of public welfare must insist upon vocational education having a larger place in the systems of training found in the schools of the United States.

The leaving of this to the States alone will delay the needed progress and improvement more than a generation, as the undertaking is so gigantic in its requirements that it must have the hearty cooperation of all the possible factors to reach a highly creditable success in a reasonable time. Most of the things that the public money is expended upon are temporary in their nature and do not return any positive permanent results. They are of a kind that must be renewed or reorganized from decade to decade. Most of the expenses that are incurred are not looking toward any positive improvement of the people themselves. The time has now come when the men and women of the Nation must be regarded by the leaders of the Nation as of more importance than any other interest, and to that end the United States Government must take a hand in making the next generation vocationally effective, independent, and resolute. It is for such a conclusion that the National Committee on Agricultural Education pleads the cause of the industrial classes, who are the basis of all the success and the prosperity of the Nation, and urges that H. R. 21490 be accepted as a preliminary solution of the greatest of present-day needs. Our country faces facts, not theories; it deals with realities, not fancies; it should meet the exigencies with a courage born of conviction, and not with a hesitancy born of ignorance.

HOMER H. SEERLEY, *President.*

APRIL 10, 1912.

ORANGE JUDD CO.,
THE PHELPS PUBLISHING CO.,
Springfield, Mass., April 12, 1912.

Hon. WILLIAM B. WILSON,
House of Representatives, Washington, D. C.

SIR: Your bill H. R. 21490, in conformity with S. 3, is the ripe fruition of much effort over a period of years on the part of the writer and the many thousands of farmers in each of our States that he has the honor to represent. Extended argument is not needed in behalf of this great constructive measure. It proposes to supplement appropriations in the respective States in behalf of rational education. It is based on the now universally recognized principle that "we best learn to do by doing." All the agitation and discussion on educa-

tional process has simmered down to this one line, "We best learn to do by doing."

And the pending bill is an extremely sensible, practical, and scientific attempt at providing means whereby the school may be hitched up with the home, the farm, and the factory, so that all these agencies may cooperate in fitting for life our youth of both sexes, by enabling them to learn to do by doing.

This measure should be passed with but minor amendments and without further delay.

Very respectfully, yours,

HERBERT MYRICK,

President Orange Judd Co.; Editor in Chief American Agriculturist Weeklies; President The Phelps Publishing Co.; Editor in Chief Farm and Home; Director of the Periodical School Agriculture, Domestic Science, and Manual Training; President Educational Press Co., Publishers of Current Events. These publications collectively represent and interpret the views of several million farmers and others of the American people.

SPRINGFIELD, MASS., *April 22, 1912.*

Hon. WILLIAM B. WILSON,
House of Representatives, Washington, D. C.:

Referring to press proof, date April 19, of Page-Wilson bill, section 33, on page 16 of said proof, should be excluded for reasons set forth in my letter of April 12.

JAMES M. CUNNINGHAM,
Subscription Manager, Phelps Publishing Co.

SIMMONS COLLEGE,
Boston, Mass., April 23, 1912.

DEAR SIR: I regret very much that I am unable to be in Washington to-day to attend the hearing on the vocational education bill. I am glad, however, to express my appreciation of the proposition and hope that your efforts in the cause of this serviceable education will be successful.

Yours, truly,

HENRY MCFANOUR, *President.*

Hon. WILLIAM B. WILSON,
House of Representatives, Washington, D. C.

[Telegram.]

BALTIMORE, MD., *April 24, 1912.*

Mr. WILSON:

From a railroad standpoint it occurs to me that the passage of the Page bill, now pending, would be most salutary in effecting much improvement in agricultural conditions.

A. ROBERTSON,
President Western Maryland Railway.

[Telegram.]

BALTIMORE, MD., *April 24, 1912.*

Mr. WILSON,
House Building, Washington, D. C.:

Can not be with you this morning, but mailing special delivery my remarks favoring Page-Wilson bill, which please see embodied in testimony.

J. C. VINCENT.

BANGOR, ME., *April 24, 1912.*

Congressman WILSON:

On behalf Bangor & Aroostook Railroad and county of Aroostook, Me., I urge passage of Page bill.

F. W. CRAM, *President.*

THE UNIVERSITY OF MINNESOTA,
DEPARTMENT OF AGRICULTURE,
University Farm, St. Paul, Minn., April 16, 1912.

Hon. W. B. WILSON,
House of Representatives, Washington, D. C.

DEAR MR. WILSON: I have your note of the 10th with inclosure, H. R. 21490 of March 7, 1912, conforming with Senate 3 as introduced by Senator Page. I have already written to each member of the Agricultural Committee in favor of this bill. I am inclosing a copy of my letter to the members of the House committee regarding this measure.

I regret that it will be impossible for me to be present at the hearing. If it seems impossible to secure this broader measure I trust that at least the extension feature as provided in the Lever bill will be passed.

Very truly, yours,

A. F. WOODS, *Dean and Director.*

UNIVERSITY OF MINNESOTA,
DEPARTMENT OF AGRICULTURE,
March 1, 1912.

DEAR SIR: Since leaving the Department of Agriculture and going into college and station work I have had opportunity to study at close range the problems of agricultural education from the standpoint of the man on the farm and his children. There are really two problems involved. The first is to get the information as to modern scientific practice in agriculture into the hands of the existing farmers. Experience of the national department and the States has shown conclusively that this must be done by taking the information directly to them, as Dr. Knapp so effectively did in the South. This phase of the work has been taken up by this State and by quite a number of other States, and is recognized as being one of the most important educational problems now before the people. Provision for developing this work has been made in several proposed bills before the National Congress. Of these, two are now under special consideration. One is the Lever bill, which is a very excellent measure, designed to provide for the agricultural extension work. The bill, if passed, would certainly serve to develop and stimulate this very important field; but, I believe, one of the most important, if not the most important, problems is connected with the boys and girls now on the farms who are being educated away from them in our present school system. It is not necessary to go into figures, but you know the fact. We must adjust our school system to correct this difficulty. The boys and girls must be trained in agriculture and industry in such a way that new visions of opportunity in farming will open up to them. Teachers must be prepared for this all-important work, and no time should be lost in providing the machinery for this purpose. The exodus from the farms is still increasing and can be stopped only by a revival of interest on the part of the young people in agriculture. These young people are not reached to any great extent through the purely extension work, but must be influenced through the regular school system. For that reason we hope that the broader measure, provided for in the Page bill, as recently amended, Senate 3, may pass, as it is well designed to meet this need. As amended, a State may accept the extension feature, which is essentially the same as the Lever bill, or any other feature, as it may feel financially able to do. The total expenditure involved is small compared with the immense returns which will flow from it. I trust if there is a possibility of passing the Page bill that the committee will favor it.

Sincerely, yours,

A. F. WOODS, *Dean and Director.*

THE UNIVERSITY OF MINNESOTA,
DEPARTMENT OF AGRICULTURE,
University Farm, St. Paul, Minn., April 15, 1912.

Hon. W. B. WILSON,
House of Representatives, Washington, D. C.

MY DEAR SIR: I have yours of April 10 with copy of H. R. No. 21490. I note what you say about its conforming to the bill introduced by Senator Page as Senate file No. 3. Our institution has given hearty support to Senator Page's bill. We believe, collectively and individually, that this is the most compre-

hensive educational bill before Congress at the present time. Personally, I have been interested in the enactment of such a law for some time. Our State institutions are upholding the policy of educating the masses rather than the classes, and in Minnesota we are ready to meet the provisions of the bill at any time.

It will be impossible for me to come before the committee personally, but I wish to assure you that I am ready to support you in any other reasonable way. Your bill and the bill of Senator Page have my keenest interest and most hearty support.

Yours, truly,

ANDREW BOSS, *Agriculturist.*

THE UNIVERSITY OF MINNESOTA,
DEPARTMENT OF AGRICULTURE,
University Farm, St. Paul, Minn., April 16, 1912.

Hon. WILLIAM B. WILSON,
Washington, D. C.

DEAR SIR: Your letter of the 10th, inclosing copy of your bill H. R. 21490, has been received. I wish to state that our institution here in Minnesota has stood back of the proposals made in your bill and in Senator Page's vocational educational bill since they have been introduced. We sincerely hope that this proposed legislation may become law. It seems to me that these bills will encourage the very best form of educational work throughout the United States; and the feature about it that we like best is the fact that all classes of industrial workers are included, and that the bill contemplates using all present educational forces for carrying out its objects, rather than establishing new institutions, which would of course result in unnecessary duplication of work. We feel that this legislation is based on the principle that can be supported by all people really interested in industrial development of the country; and we have urged our Representatives and Senators to support this legislation.

Hoping that you may be successful in this work,

Yours, very truly,

THE EXTENSION DIVISION,
A. D. WILSON,
Superintendent of Extension Work.

TEACHERS' COLLEGE, COLUMBIA UNIVERSITY,
New York, April 22, 1912.

Hon. Mr. WILSON,
House of Representatives.

DEAR SIR: I wish to place on record my approval of H. R. 21490 and to urge favorable action by the Committee on Agriculture. I regret that duty here prevents my attendance at the hearing to-morrow. The country is in dire need of the practical education which this bill proposes to encourage.

Sincerely, yours,

BENJAMIN R. ANDREWS,
Secretary Schools of Industrial and Household Arts, and Secretary of American Home Economics Association.

NEW YORK, *April 24, 1912.*

Hon. WILLIAM B. WILSON:

I am heartily in favor of the plan for Federal aid in industrial education as embodied in Page bill.

EDWARD T. DEVINE.

NEW YORK, *April 24, 1912.*

Hon. WILLIAM B. WILSON,
House of Representatives, Washington, D. C.:

I sincerely hope you will lend your full support to revised bill to promote instruction agriculture trades industries and home economics; this country is suffering from lack of practical education.

ALEXANDER C. HUMPHREYS,
President Stevens Institute of Technology.

NEW YORK, *April 24, 1912.*

Hon. WILLIAM B. WILSON:

Strongly indorse Page education bill revised by industrial educational society.

S. M. LINDSAY.

NEW YORK, *April 23, 1912.*

Hon. WILLIAM B. WILSON,
House of Representatives, Washington, D. C.:

Favor your bill for Federal aid to education securing cooperation between administrative departments.

OWEN R. LOVEJOY,
Secretary National Child Labor Committee.

MOUNT VERNON, N. Y., *April 16, 1912.*

Hon. W. B. WILSON,
Chairman Labor Committee, House of Representatives, Washington, D. C.

DEAR CONGRESSMAN WILSON: Your favor dated April 10, inclosing copy of H. R. 21490, is received and read with interest. I regret that I shall not be able to attend the hearing before the Committee on Agriculture in relation to this bill. I earnestly hope that the Committee on Agriculture may see its way clear to report the bill with the recommendation that it pass. In my judgment the proposed measure meets the requirements of the situation in regard to industrial education, and its provisions will do much to satisfy a very general demand on the part of the people for industrial training at the public expense.

I am, yours, truly,

JOHN MITCHELL,
Vice President American Federation of Labor and Chairman of its Committee on Industrial Education.

NEW YORK, *April 22, 1912.*

Hon. W. B. WILSON,
House of Representatives, Washington, D. C.:

I heartily indorse your bill for Federal aid to industrial education. Regard provisions securing mandatory cooperation between administrative departments as most important.

C. R. RICHARDS, *Director Cooper Institute.*

CORNELL UNIVERSITY,
Ithaca, N. Y., April 15, 1912.

MY DEAR SIR: I have your letter of the 10th instant inclosing a copy of the bill you have introduced in the House of Representatives providing for cooperation with the States in encouraging instruction in agriculture, the trades and industries, and home economics in secondary schools; in preparing teachers for these vocational courses in State colleges of agriculture and the mechanic arts; in maintaining instruction in these vocational subjects in State normal schools; in maintaining extension departments in State colleges of agriculture and the mechanic arts. This bill conforms with the bill introduced in the Senate by Senator Page, of Vermont.

I regret that it will not be possible for me, on account of other engagements, to attend the hearing on this measure to be held by the Committee on Agriculture of the House of Representatives on April 23. I desire, however, to assure you of my indorsement of the policy underlying the bill.

I am impressed with the thoroughgoing character of the legislation which you propose. If the bill is enacted into law it will mean a vitalization of agricultural and industrial education all along the lines from the farm and shop up through the schools to the colleges, and reversely. The provisions of a special

appropriation for the training of teachers in these vocational subjects seems to me especially wise, as at the present time teachers are not available.

Very truly, yours,

J. G. SCHURMAN, *President.*

Hon. WILLIAM B. WILSON,
Chairman Committee on Labor, House of Representatives,
Washington, D. C.

NATIONAL METAL TRADES ASSOCIATION.

Mr. Prosser presented the following copy of a telegram received by Senator Page quoting a resolution passed by the National Metal Trades Association:

NEW YORK, *April 12, 1912.*

Senator CARROLL D. PAGE,
Washington, D. C.:

The following resolution was passed yesterday:

Be it resolved, That the National Metal Trades Association in convention assembled, recognizing that the future prosperity of this country and the welfare of its people is dependent upon their efficiency in the home, the shop, and the farm, believe strongly that Federal aid of a substantial character for industrial, household arts, and agricultural training, fitting young people for all kinds of useful and wage-earning occupations, should be granted by the National Government at the earliest possible moment, in order that the various States of the Union may be impressed with the interest of the National Government in the movement for practical education and stimulated by the aid and cooperation which Federal support would give. We believe that the conservation of the practical and constructive ability of the young people of this country is to-day at least as important a duty on the part of this country as the conservation of our forests and our mines, and that every consideration demands that steps should be taken to secure Federal aid for promoting a system of education that will send our boys and girls out to the duties of life fitted to be effective, intelligent workers, as well as useful citizens.

ROBERT WUEST,
Commissioner National Metal Trades Association.

THE NORTH CAROLINA STATE NORMAL AND INDUSTRIAL COLLEGE,
Greensboro, N. C., April 15, 1912.

Hon. W. B. WILSON,
House of Representatives, Washington, D. C.

MY DEAR CONGRESSMAN WILSON: I was very glad to receive your letter of April 10, and to learn that the Committee on Agriculture of the House is to give a hearing to our bill on April the 23d. Our national committee on agricultural education will endeavor to have one or more representatives there. I have been working for this bill and its predecessors ever since the first one was introduced some years ago, and have been at a number of hearings. I shall, however, be present if possible.

If there is anything more I can do to assist in this great work, be sure to write me.

Yours, very truly, E. E. BALCOMB.

RALEIGH, N. C., *April 23, 1912.*

Hon. WILLIAM B. WILSON,
Chairman Committee on Labor, Washington, D. C.:

Impossible to attend hearing. Heartily favor Page-Wilson bill. Urge its passage. Teachers and people of State want it.

J. Y. JOYNER.

OHIO AGRICULTURAL EXPERIMENT STATION,
DEPARTMENT OF COOPERATION,
Wooster, Ohio, April 15, 1912.

Hon. WM. B. WILSON,
House of Representatives, Washington, D. C.

DEAR SIR: I regret very much indeed that other engagements will prevent my being present at the hearing regarding House resolution 21490 on the 23d

instant. I am heartily in favor of the purpose of this bill, so far as I understand it, and would like very much indeed to be present to hear the course of the discussion.

Yours, very truly,

DEPARTMENT OF COOPERATION,
Per R. H. MORRIS.

WOOSTER, OHIO, *April 20, 1912.*

Hon. WM. B. WILSON,
House of Representatives, Washington, D. C.:

I believe that the development of vocational training contemplated in your vocational educational bill is absolutely necessary if our country is to hold its own in industrial competition with other nations. The bill is framed along wise and conservative lines. It should receive the support of every patriot.

CHAS. E. THORNE,
Director Ohio Agricultural Experiment Station.

THE OHIO STATE UNIVERSITY,
Columbus, April 18, 1912.

Hon. W. B. WILSON,
Member of Congress, Washington, D. C.

MY DEAR SIR: In reply to yours of April 10.

I am engaged in two or three public matters here which will make it impossible for me to be in Washington next week. I appreciate your invitation to be present at the hearing on H. R. 21490 on April 23.

As chairman of the executive committee of the Association of Agricultural Colleges and Experiment Stations I am obeying the instructions of that association in supporting the Lever bill for agricultural extension. The association declared itself in favor of the fundamental principles of the Page bill, which are embodied in your bill. There was, however, considerable discussion and disagreement as to the method of administration. The Page bill was finally amended to permit States to avail themselves of such features of the bill as they desired. For example, the separate agricultural high school is an impossible situation in the highly organized States, but very possible in the agricultural States.

The one thing that is new about this measure is Federal aid to secondary schools. The Federal Government so far has confined its aid to agriculture in its several lines and mechanic arts. This aid has been designated to colleges. The new feature is now to extend this aid to the secondary schools. Senator Page is quite eager to go even further down and aid the struggling boy who has not yet reached the high-school age. I have given this matter considerable study and my own judgment is that we ought not to confuse those two ideas and that the bill should be taken up by a committee of educators representing the city and rural districts both, probably aided by the United States Commissioner of Education, and put into such shape as to be consistent with existing forms of education in the several States and at the same time insure the fact that the Federal money is used along well-defined lines.

I have never been able to resist the feeling that the Page bill was an omnibus bill, putting all sorts of things into it in the hope that nobody would oppose it. Personally I am in favor of every principle in the Page bill, but not in favor of the universal application of some features of it. There would seem to be great necessity for adjustability, and I hesitate to indorse what might be termed a Washington-made plan for a Montana, Arkansas, or Ohio condition. The States vary so widely in local administration that I feel we must stand for the principles and leave liberty in administration. Moreover, there is constant danger now of the Federal Government exercising too much power in the local States. This has already been the experience in certain places, and I am therefore disposed to guard very carefully any encroachment upon the liberty of administration within a particular State.

I am more than willing to have the Federal Government aid the cause of education, but I am not quite to the point where I am ready to accept the money at any price.

Yours, very truly,

W. O. THOMPSON.

PHILADELPHIA, PA., *April 23, 1912.*

Hon. WM. B. WILSON,
Washington, D. C.:

Can not attend the hearing. Miss Gill will speak for the Federation of Women's Clubs.

LUCRETIA L. BLANKENBURG,
Vice President American Federation of Women's Clubs.

THE PENNSYLVANIA STATE COLLEGE,
State College, Pa., April 15, 1912.

Hon. WILLIAM B. WILSON.

MY DEAR SIR: I beg that you will permit me to say a word with reference to the Page bill and Lever bills having to do with United States support of vocational education and now pending before Congress.

According to my understanding the Lever bill is largely to advance financial aid to vocational training of the agricultural classes and almost entirely neglects provision for training of a similar character for the people of other industries. The Page bill, on the other hand, is broad in its scope and should do much to forward the vocational preparation of all the industrial workers of the country.

Insomuch as those having vocations in other fields than those of agriculture must perforce be much larger in numbers than those in agriculture, and insomuch as their efficiency of production must have as great a value to the people per hour of labor, the Page bill seems to be a far more salutary and helpful measure. As a matter of fact the continual improvement of labor-saving devices on the farm is bound to reduce the amount of labor per acre, which can be utilized for a given kind of agricultural production. This has in the past and will in the future by the natural law of supply and demand tend to herd more and more people into the towns and cities. The sons and daughters of these people are now obtaining very little training of a suitable kind to make them efficient citizens, and the condition is growing rapidly. Suitable vocational training would rapidly change these conditions and greatly raise the efficency of the country per man

Under these conditions, to give the aid and sanction of Congress to even such a valuable work as that of agricultural vocational training, without at the same time giving a similar stamp of approval, with proper substantial financial aid, to suitable methods for alleviating and improving the great mass of people who are now destined to grow up in our cities and towns unskilled in any useful manual art appears to be not only unjust but undesirable.

The educational committee of the American Institute of the Electrical Engineers (an organization which represents in its membership a large proportion of the most intelligent and thoughtful industrialists in the country) has considered this subject in meeting from the standpoint of the industries with which the institute is allied and unanimously favor the enactment of the Page bill for reasons similar to those specified above.

In reading this letter I hope that you will not for a moment conceive the thought that the institute committee does not fully approve agricultural vocational training, but its members come in contact so closely with the enormous problems now pressing which must be solved by the American people with reference to our industrial classes other than agricultural that it seems right to bring to you an earnest plea that you legislate in a way which will in the most efficient manner advance a vocational efficiency of all the people irrespective of the industry to which they may be destined.

I assure you that anything which you will do to support the Page bill will be highly appreciated by the organization which I represent and in fact by all the people engaged in industries other than the agricultural. I further personally believe that the great bulk of the farmers of the country will much more heartily approve the passage of a bill which is free from class legislation and which is aimed to help the educational methods of the whole people rather than one which is merely for a portion of the people.

Yours, faithfully,

JOHN PRICE JACKSON.
Dean School of Engineering.

WASHINGTON, D. C., *April 23, 1912.*

Hon. W. B. WILSON.

DEAR MR. WILSON: As president of the Pennsylvania Rural Progress Association I came to Washington to-day to put our association on record as heartily in favor of your bill No. 23581. In Pennsylvania we stand urgently in need of Federal aid for secondary schools, for extension work, and, indeed, for the general provisions for which your bill provides.

So meager is the education in rural districts in Pennsylvania that the farm boys and girls are being nothing less than dwarfed intellectually. And it is true that whatever education they receive fits them only to hold down office stools—and that but poorly.

I have watched the bright boys and girls of my town for the past 15 years, and 10 at a time they have turned their feet toward the city. They would have been a glory and a blessing if they had remained to the rural districts.

Therefore by all means give us the means to keep them there and to offer them an education which will fit them to understand the land upon which they were born.

I am obliged to return to-night (Tuesday) to Pennsylvania. Otherwise would have remained to the hearing to-morrow.

Yours, very sincerely,

RUTH ELLICOTT POWERS,
President of the Pennsylvania Rural Progress Association.

THE PENNSYLVANIA STATE COLLEGE,
State College, Pa., April 15, 1912.

Hon. WILLIAM B. WILSON,
House of Representatives, Washington, D. C.

MY DEAR SIR: Dr. W. O. Thompson, chairman of the executive committee of the American Association of Agricultural Colleges and Experiment Stations, is loyal to the interests of Pennsylvania agriculture when he urges the passage of the extension bill known as H. R. 22871.

The revised bill, which has been given this number, is satisfactory to the School of Agriculture and Experiment Station in the Pennsylvania State College, and we believe that great good would result to the people of the State through the passage of this bill. We hope that it may pass without further amendment, and as acting dean of the School of Agriculture I have the honor of calling this matter anew to your attention in the hope that you may see fit to urge the speedy passage of this extension bill.

Respectfully, yours, ALVA AGEE, *Acting Dean.*

MANSFIELD, PA., *April 15, 1912.*

Hon. W. B. WILSON,
Washington, D. C.

MY DEAR SIR: I have your letter of April 10th and the copy of your vocational education bill (H. R. 21490). Your letter also contains a request for me to be in Washington to meet the Committee on Agriculture on April 23.

A previous engagement which will take me to New York City at that time renders it impossible for me to be there, and I am accordingly writing to express the very earnest hope that this measure may pass Congress and become operative at the time specified in your bill.

The value of such work seems to some of us exceedingly great, yet the expense attached thereto puts it beyond the reach of many communities. Since the universal judgment of our people seems to place the agricultural interests above those of any other American industry, such a measure as this should have Federal support, as being for the benefit of all the people. I note, too, that your bill does not omit other industries and home economics. This last seems to me so vital that I am steadily growing to believe the future stability of our Republic is almost dependent upon it, so complex has our civilization become and so largely have the homes been neglected, because of the turning of women to the various industries.

With the hope, therefore, that your measure may be heartily supported, I am,

Very truly, yours,

ANDREW THOMAS SMITH,
Principal.

PITTSBURGH, PA., *April 24, 1912.*

Hon. WM. B. WILSON,
House of Representatives, Washington, D. C.:

Page bill providing agriculture man each county very desirable for counties along Bessemer Road and your assistance in passage of same will be appreciated.

E. H. UTLEY.

WASHINGTON, D. C., *April 25, 1912.*

Hon. WM. B. WILSON,
House of Representatives, Washington, D. C.

DEAR SIR: Yours of the 10th of April inviting me to attend the hearings on your bill, H. R. 21490, was duly received and I have been at the hearings every day for three days; but there has been no time for me to be heard and, as I must leave town to-morrow for a business trip west, not returning until May 9, there will probably be no time for me to be heard. Consequently I am sending you this statement to be incorporated in the report of the hearings, if you care to use it in such a way.

I have been for a great many years extremely conservative on the matter of vocational training at the public expense and somewhat of a critic of a number of young men of my acquaintance who have shown what seemed to me to be a reprehensible itching to get into some employment where they could get small wages at once rather than remain in school and get a thorough, broad preparation for life work. It seems to me that there is a danger that in many cases the spirit of commercialism will emphasize a mere bread-and-butter education at the expense of a more broad and liberal equipment for the varied responsibilities and possibilities of life, especially as conditions are in this country. But, in spite of all theorizing, the fact remains that many boys and girls get tired of the public schools and leave them at an immature age under conditions that handicap them by having neither a good general education nor a vocational education. This being so, we must face conditions rather than theories and devise some way of educating these young people for increased efficiency. Much as we might wish to have all the youth of the country acquire first a broad foundation and then build upon it a vocational superstructure, in many cases this ideal can not be reached. Therefore I am in favor of the vocational school training features of your bill, and I am most emphatically in favor of the agricultural college extension features of it, which I understand are practically identical with the provisions of the Lever bill.

I also desire to bring to the attention of the committee the fact that at the meeting of the Farmers' National Congress, held in Columbus, Ohio, October 12 of last year, a resolution was adopted favoring the Page bill, so called. As I understand it, your bill is practically the Page bill or a perfection of the same.

Respectfully,

GEO. M. WHITAKER,
President Farmers' National Congress.

This resolution is as follows:

"*Resolved*, That the Farmers' National Congress reaffirms its previous declarations in favor of the Page educational bill now pending in Congress, giving aid and encouragement to the teaching of agriculture in the public schools of our country, and urge its speedy enactment into law."

THE UNIVERSITY OF TEXAS,
Austin, Tex., April 16, 1912.

Hon. W. B. WILSON,
United States House of Representatives, Washington, D. C.

MY DEAR SIR: I regret very much that I can not be present at the hearing of your House bill 21490. This bill seems to me to embody more good points and to more successfully avoid the dangers incident to the national support of education than any bill which has been presented to Congress on this subject during my experience. I sincerely trust that it will meet with favorable consideration. I am sure that it will meet with the approval of the great mass of citizens of this State who have given the matter thoughtful consideration.

Sincerely, yours,

A. CASWELL ELLIS, *Director.*

UNIVERSITY OF VIRGINIA,
Charlottesville, Va., April 22, 1912.

Hon. W. B. WILSON,
Chairman Committee on Labor,
House of Representatives, Washington, D. C.

DEAR SIR: I regret very much that sickness in my family will prevent the acceptance of your invitation to be present at the hearing of your committee on the bill to encourage industrial education in the secondary schools. I believe that this proposition will have as far-reaching influence on the future girl and boy as has the agricultural work done by the colleges of agriculture in making more intelligent farmers. Even as great as is the practical value of this kind of training, it is not so great as is its social value in training thinking citizens, by giving training which they continually apply, and hence think about outside the school as well as inside.

Very truly, yours,

R. M. BIRD,
Professor of Chemistry.

RHODE ISLAND STATE COLLEGE,
Kingston, R. I., April 14, 1912.

Hon. W. B. WILSON,
Chairman Committee on Labor,
House of Representatives, Washington, D. C.

DEAR SIR: I regret sincerely that, while I heartily approve of the general ideas contained in your bill, and hope during my lifetime to see them enacted into law, I can not feel that there is yet a sufficient body of public opinion united and enthusiastic for the provisions of this bill or even for the main idea of having the General Government enter upon the territory of the secondary schools, to give the vitality required for passage through the present Houses of Congress. You, of course, are much better informed on such matters than I am, and perhaps I have no right to express to you any opinion. It is right, however, for me to say that on a recent visit to Washington, in discussing the Page bill with some of those with whom I personally might possibly have some influence, I found the feeling very strong that such a measure is too complicated, too comprehensive, and in many of its parts too antagonistic to the susceptibilities of the people of large parts of our country to command their support.

I therefore write, with regret, to say that I do not see how my appearance at the hearing could be helpful.

Thanking you for the courtesy of writing me, I am,

Very truly,

HOWARD EDWARDS, *President.*

COOPERATIVE LAND-MORTGAGE BANKS.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Wednesday, May 29, 1912.

The committee met at 11.50 o'clock a. m., Hon. John Lamb (chairman) presiding.

The CHAIRMAN. We have arranged a hearing this morning to consider Senate joint resolution 75, to provide for the appointment of a commission to investigate the operations of cooperative land-mortgage banks and cooperative rural credit unions in other countries.

[S. J. Res. 75, Sixty-second Congress, second session.]

JOINT RESOLUTION To provide for the appointment of a commission to investigate the operations of cooperative land-mortgage banks and cooperative rural credit unions in other countries.

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the President is hereby authorized to appoint, by and with the advice and consent of the Senate, a commission of three members, not more than two of whom shall be of one political party, to investigate the operations of cooperative land-mortgage banks and of cooperative rural credit unins in other countries; compensation of the members of the commission shall be five thousand dollars each. Said commission is hereby authorized to employ such clerks, stenographers, and other assistants as may be necessary, which employees shall be paid such compensation as the commission may deem just and reasonable, upon a certificate to be issued by the chairman of the commission. For the purposes of its investigations the commission shall be authorized to incur and have paid upon the certificate of its chairman such expenses as the commission shall deem necessary: *Provided, however,* That the total expenses authorized or incurred for compensation, employees, and otherwise shall not exceed the sum of thirty thousand dollars. Said commission shall, not later than one year after appointment, submit a report to Congress, embodying therein recommendations as to how the systems of such land-mortgage banks and rural credit unions may best be adapted to the needs and requirements of the people of the United States, and at that date this commission shall cease to exist.

Passed the Senate May 7, 1912.

Attest:

CHARLES G. BENNETT, *Secretary.*
By H. M. ROSE, *Assistant Secretary.*

As you will recollect, we had some discussion of this indirectly one day in connection with another matter, and ex-Gov. Herrick, of Ohio, had something interesting to say along this line. We also have before us House resolution 294, introduced by Mr. Lever, and I will ask Mr. Lever to present the gentlemen who are to address the committee.

Mr. LEVER. Mr. Chairman, I desire to present Mr. C. W. Burkett, editor of the American Agriculturist, of New York.

STATEMENT OF MR. C. W. BURKETT, EDITOR OF THE AMERICAN AGRICULTURIST, OF NEW YORK.

Mr. BURKETT. Mr. Chairman and gentlemen of the committee, I desire to call attention to the committee report to the British Government, in which the following statement was made:

> Cooperative credit, as illustrated in the People's Bank of the Raiffeisen and other patterns on the Continent, is a modern discovery which may be likened, as a factor in production, to the discovery of steam.

This whole subject of cooperative mortgage banks and rural credit associations has created an immense interest in this country, especially among the farming people in our section of the country. It is not my purpose, in the few remarks I will make to-day, to enter into a description of the different systems of these mortgage banks as operated in the European countries, but I have heard a great deal about the cooperative banking systems. For instance, the popular banks and the Raiffeisen banks of Germany in 1909 did a total business of $4,800,000,000, or something like 18,000,000,000 marks. Now, that is an immense help and aid to the farming population.

Ex-Gov. Herrick said not long ago that the German Emperor had said the Raiffeisen banks had done more for Germany's industrial development than any efforts that had been made in any direction.

The situation in this country is this: We have built up our city institutions; we have built up our railroads and our industrial enterprises, and every sort of institution or enterprise of an urban nature has had legislation and the direction of our best and ablest men. In agriculture there has been individual action; but when it comes to the building of a railroad, or a certain body of capitalists desire to put through a railroad, they establish their enterprise by providing for cooperative effort and everybody chipping in a little by buying bonds or stocks, or something like that, and then the thing is put through. These bonds may sell for 4, 4½, or 5 per cent, depending upon the safety and other conditions that are back of them.

Supposing several farmers desire to put through a drainage enterprise. Can they issue bonds on that drainage enterprise? There are no means under the sun to-day whereby farmers have any opportunity for cooperative effort in order to get through some of their cooperative enterprises.

Mr. MAGUIRE. Yo do not deny that they have the right to organize a drainage district under the drainage laws in the different States and issue bonds?

Mr. BURKETT. There are in certain sections laws providing for the organization of drainage districts. North Carolina is one of the States, but in New York we can not issue bonds. I have a little farm up there I would like to drain, but there is no provision for it under the State law.

Mr. WICKLIFFE. You could do it, however, by securing the necessary State legislation, like they do in any other State where they have a law providing for the organization of drainage districts.

Mr. BURKETT. In some places they had large areas which were to be drained, and they have passed laws providing for that; but, for instance, in places like New York, there are lands there which require drainage, but they are only a small part of the territory, and no laws have been passed.

Mr. RUBEY. We have drainage districts in Missouri, under our law.

Mr. TALCOTT. You are speaking of individual farmers.

Mr. BURKETT. The individual farmers; exactly. Supposing I wished to develop my farm and I had to have a little more money; the only way I could get it is by going and have a mortgage placed upon the farm, and in order to obtain this money I will have to pay higher rates than the municipal enterprise that wants to borrow money. The municipal corporation which desires to put in a system of waterworks can issue bonds, and the credit of the city is in back of that enterprise. They can sell those bonds at a rate of interest around 4 or 4½ per cent. If I wish to raise some money to carry on my farm operations, I have to go to a bank and give a personal note, bearing one or two names, or else place a mortgage on my farm, and I can not obtain the rates which the city enterprise can.

Now, these credit organizations in Europe simply permit the farmers to get together and give their own personal credit, through their association, and borrow this money. As I stated a moment ago, $4,800,000,000 represents the total business of those banks in Germany in 1909. That would mean to our farmers if a body of, say, 10, 20, 30, 40, 50, 100, or 200 of them would get together in a partnership and desired to carry on something and to borrow money for this enterprise, that they could obtain this money on exactly the same basis as the municipality could obtain the money—at the same rate of interest.

Mr. MCDERMOTT. What do they have to pay in the old country?

Mr. BURKETT. Three and one-half to four and one-half per cent.

Mr. LEVER. What is the general average for farm loans in this country?

Mr. BURKETT. They run all the way from 5 to 8 per cent.

Mr. MAGUIRE. The rates are 5 to 5½ and 6 per cent in Nebraska.

Mr. BURKETT. In certain sections of the South and West—is there any gentlemen here from Kansas?

Mr. TAGGART. I am from Kansas.

Mr. BURKETT. What are the mortgage rates in Kansas?

Mr. TAGGART. You mean for borrowing money on farms?

Mr. BURKETT. Yes; on real estate.

Mr. TAGGART. I have not known of anything less than 6 per cent.

Mr. BURKETT. The rates run up around 7, do they not?

Mr. TAGGART. Yes; 7 is quite common. There may be cases where the security is very excellent, and at certain times, when they might secure money at a little less than 6, maybe 5½; but I have never known of any loans being made at less than 6 per cent.

Mr. MAGUIRE. In Nebraska they are loaning money on mortgages at 5½ per cent.

Mr. TAGGART. That might be true in Kansas. You know I live in the city. Farther out in the country they might get loans for 5½.

Mr. SIMMONS. May I ask if the rate of interest for loans on farm property is any higher than the rate of interest for loans in the city?

Mr. TAGGART. Not so high. They loan money at 8 per cent in the city there on homes. They have done it and they do it. Seven per cent is very good.

Mr. BURKETT. The mortgage rate in New York City, I should say, is 5 and 6 per cent.

Mr. McDERMOTT. You mean in New York State?

Mr. BURKETT. No; in New York City.

Mr. WICKLIFFE. In those foreign countries where you say the farmers get money for 4 and 4½ per cent, can you state what a farmer, borrowing money on his own responsibility, say with an indorser, gets money for?

Mr. BURKETT. I can not answer that.

Mr. WICKLIFFE. Is not the rate much lower than it is in this country?

Mr. BURKETT. It might be. That is one of the problems, and that is one reason why this resolution should prevail.

Mr. WICKLIFFE. What I wanted to ascertain was whether the system you speak of in these foreign countries results in the farmers being able to obtain a low rate of interest, or is it a fact that all loans are at a lower rate of interest than loans in this country?

Mr. BURKETT. As I understand it, this proposition is on about the same basis in this country and the other countries.

Mr. WICKLIFFE. For instance, in Germany they do not lend money there to anybody, where there is any kind of security, at as high a rate as 8 or 10 per cent?

Mr. BURKETT. No; I think not.

Mr. WICKLIFFE. Then it is not due to this system alone that they are able to secure a low rate of interest in Germany.

Mr. BURKETT. In a pamphlet I have here, referring to this Raiffeisen system, it says that this system means that the individual farmers can get credit over there in Germany.

Mr. TALCOTT. Is that not so here?

Mr. BURKETT. There is such a discrimination against farm loans that it is absolutely impossible.

Mr. TALCOTT. There are certain sections in this country where the savings banks are loaning to farmers on individual applications for loans.

Mr. BURKETT. That is undoubtedly true.

Mr. HAUGHEN. Can you state what the rate of interest is?

Mr. BURKETT. We were just discussing that before you came in.

Mr. HAUGEN. You said there was a discrimination, and I wish to know where it comes in.

Mr. BURKETT. The discrimination, perhaps, is not real, but there are a great many people who do not want to take farm mortgages.

Mr. HAUGEN. There are also a number of people who had rather have that kind of a security than any other.

Mr. BURKETT. I do not think there are as many as those who do not.

Mr. HAUGEN. I know of banks that have money to loan that loan it on real estate altogether.

Mr. BURKETT. To a certain extent some of them have, but they are no longer doing it. I had a long talk with Paul Morton before he died, and he said there was a feeling in the United States against the loaning of money on farm mortgages.

Mr. HAUGEN. They are still loaning it.

Mr. BURKETT. To a certain extent.

Mr. MAGUIRE. That is not true in my State. In my State farm mortgages are considered the best security there is.

Mr. BURKETT. I believe that myself; I do not believe there is any better security than the farm mortgage.

Mr. HAUGEN. I do not want what you believe, but I understand you to say there is a discrimination, and I want to know where it is, when farm security is the best in the market.

Mr. TALCOTT. Up in my section mortgages on real estate in the city and mortgages on farm property pay only half of what other forms of investments bring.

Mr. BURKETT. That is not so at any other point. I am in favor of the banks, and I believe that under this representative system these bonds are just as liquid as are the bonds attached to the municipal enterprises and that liquid condition of the farm mortgages would make them a very desirable property, because one of the objections to giving a farm mortgage for three or four years is that the person who loans the money feels, "But I may want that money before the mortgage is due." Under the system that they have in France and Germany a man can put those bonds on the market the next day, and he would be able to sell them right away.

Mr. MAGUIRE. Is not that true of many banks now? Is there not a constant shifting from bank to bank of securities?

Mr. BURKETT. In my little home town in Ohio I do not believe there is anybody who ever thinks of selling a mortgage.

Mr. MAGUIRE. I think that is an unusual condition.

Mr. WICKLIFFE. As I understand you, these bonds are listed on an exchange just like the large securities are listed on an exchange in this country.

Mr. BURKETT. I can not say on what kind of an exchange they are listed, but they are listed so that they are constantly bought and sold just the same as electric-light or water bonds are sold over here.

Mr. WICKLIFFE. Just like Government bonds are sold?

Mr. BURKETT. Just like Government bonds are sold. Furthermore, this pamphlet which I have here says that these mortgage bonds frequently stand equal with Government bonds as to safety. They are a very desirable class of securities.

I believe heart and soul in the credit systems of these credit banks in Europe. I believe, gentlemen, that it would do more toward stimulating agriculture than anything else we could bring in, except the introduction of the country-life education. I am not so much advocating these banks, but what I think we ought to have is this commission appointed so the entire facts covering this whole thing could be studied. At the Southern Commercial Congress, held in Nashville in April, they spent seven days down there discussing the whole proposition of the different banking systems in Europe, and the point I wish to bring to your attention is that the farmers would like you to make it possible for this commission to be appointed to investigate this subject.

That is all I am pleading for. I am simply here this morning as an expression of public opinion. The papers I represent go into 2,000,000 farm homes, and I can say truly and honestly that there have been more inquiries aroused over this farm financing and, as I said a moment ago, the country-life education than all of the other subjects put together. The farmers are more interested in this than in the tariff or any of the other things we are talking about to-day. There is not a day when there is not a large pile of letters that come in to us asking why these people do not take up this Senator Gronna resolution and the Lever resolution and ask Congress to send a commission

over to study these systems. Now, gentlemen, this does not seem to be anything more than a common-sense plan to have some official body go over and take sufficient time to study this whole situation of farm finance in Europe; and if anything is learned about their system which will help the small towns and rural districts, we ought to have that information.

The CHAIRMAN. Let me ask you a question right there. Why can not we get full information touching all of this business through the press and through correspondence without sending another roving commission, as I call them, to go over Europe to find out about this thing?

Mr. WICKLIFFE. In that connection I understand the State Department is making this very investigation now. What you are saying is very interesting, but I think we are all pretty well informed as to business conditions in this country, as to the way money is loaned. I would like to hear something in regard to the needs of this commission and the kind of work it would do, where, and how, and so on. The suggestion of the chairman, of course, should be answered—if it can be done in any other way.

Mr. BURKETT. Mr. Chairman, I have here various articles that have been published in all the papers in the land on this question of farm financing. The editors do not know exactly where they are on the proposition.

The CHAIRMAN. They hardly ever know, do they?

Mr. BURKETT. The editors are more closely in touch with public opinion than any other class of people under the sun. When some old farmers write to us and tell us these things and ask us why we do not do this and why we do not do that, we think we are pretty closely in touch with what they desire.

You say, Why not let the State Department do this? I wish to tell you that the farmers are very skeptical of our dollar State Department. They have not very much faith in that kind of an investigation.

Mr. LEVER. Is not this true also, Mr. Burkett, that the information that the State Department would obtain they would have to get through their consular agents over there? And necessarily they are not experts in this kind of business.

Mr. BURKETT. And their ambassadors. Gentlemen, when you speak about the State Department investigating this through their ambassadors, the farmers have not very much faith in what the ambassadors would find out about the proposition. The farmers have never spoken in all time as they have in the last few years, and they are going to speak louder and louder right along. They desire some commission that represents the farmers' viewpoint. The other fellow has been represented all the time, and the other viewpoint, and the farmers do not want lawyers and doctors and bankers and all that class to go there and investigate this matter from their standpoint. They simply ask that this commission be broad-minded men. If the commission is composed of a lawyer and a farmer, all right; if composed of a banker and a farmer, all right; or a farmer and a man of some other profession, all right; but they want some one who knows something about farming conditions.

The CHAIRMAN. There will be no commission sent from this committee who are not the farmers' friends.

Mr. BURKETT. The farmers are going to determine who are the farmers' friends and they are not going to take anybody else's word for it.

Mr. MCLAUGHLIN. Ex-Gov. Herrick is ambassador to France?

Mr. BURKETT. Yes.

Mr. MCLAUGHLIN. Have you ever heard him speak on this subject?

Mr. BURKETT. Ex-Gov. Herrick is from my State, and I have heard him speak.

Mr. MCLAUGHLIN. About his interest in this work and the sincerity with which he will make an investigation of this work?

Mr. BURKETT. Ex-Gov. Herrick has been the foremost spokesman on farm finance in this country from that standpoint.

Mr. NORRIS. He is in favor of this resolution, too?

Mr. BURKETT. He is in favor of this resolution; yes. I have myself heard the ex-governor say that he did not know all about this subject and that it ought to be discussed and investigated, but he does not, perhaps, speak from the farmers' viewpoint. I had a talk with Sir Horace Plunkett a while ago, and he said this would establish a precedent in this country, because there was never anything investigated from the farmers' viewpoint.

The CHAIRMAN. Let me say right there that I talked with ex-Gov. Herrick about this matter and he said that he would get up all the information and all the data possible and let me hear from him on this subject. That was the last thing he said to me. Then I desire to call your attention to the fact that the State Department has been in communication with all the foreign countries on this subject and the State Department can give us just as much information by correspondence as a commission would be likely to obtain.

Mr. BURKETT. I do not believe any investigation that is secondary is as good as that which is made primarily with that point of view in mind. I think that the appointment on this committee (I do not care how many; three, I believe your resolution calls for) of men who are actually identified with agriculture and are representative men with allied interests in agriculture—I think whatever they would report the farmers would have the utmost confidence in.

Now, gentlemen, I feel I am making a failure before your committee; I am not getting before you what I wish to; I am not making you feel how the farmers feel on this thing. The farmers do wish this. They have heard so much about the Gronna resolution, and they have heard so much about investigating this farm finance proposition, and they have passed so many resolutions, and have discussed it, and I wish you to know that they demand it. They believe this commission would bring this about. The farmers are taking it up and studying it, and they are going to continue to study it. At our New York Agricultural Society meeting, which meets next January (which is the acknowledged clearing house of agricultural thought in that State), farm finance is to be given the right of way on that occasion; but we must view this thing and study it from every viewpoint. The farmers would like to have this Congress appoint a commission to study this thing from their viewpoint, and for Congress to have these facts, and the other people to have the facts, and then to see if some sort of legislation can not be enacted

which will help these people. I think that is a very reasonable request, and I do not believe any member of this committee will find any fault with the farmers in reference to that.

Mr. HAWLEY. If the commission is appointed and goes to Germany, for instance, what would be the nature of the investigation there, and whom would they see?

Mr. BURKETT. They are going to visit, likely, the cooperative enterprises, and they would talk with the men, and talk with the officers of these, and the men who are interested in them—the men who have received the advantage of these banks over there, and they would get the mutual working plans of these different systems over there. Then, knowing farming as they know it, from their viewpoint, they would be able to present recommendations that would make the system over there adaptable to our own needs.

Mr. HAWLEY. Are there any books published in Germany, for instance, expounding this system?

Mr. BURKETT. I do not know of any books which take this up from the farmers' viewpoint.

Mr. HAUGEN. Ex-Gov. Herrick put that all in the record here, and it is in the record before this committee now. We do not have to go to Germany for it; it is all in the record now before this committee.

Mr. BURKETT. Gentlemen, I have not any personal interest in this matter at all, and certainly I am not going to be appointed on this commission.

Mr. HAUGEN. I am not saying anything about that; I am speaking about the necessity of going to Germany to obtain this information. You have spoken so much about the farmer, and we have a few farmers to-day in Iowa (and I believe I know something about the farmers in Iowa), and they feel we have had about all the commissions that are required. That is the sentiment which prevails in my vicinity.

Mr. TALCOTT. You mean it is not necessary for these men to go to Germany to find these things out.

Mr. HAUGEN. Here is the proposition: This resolution carries a salary of $5,000 for each member, and it will run up into the hundreds of thousands of dollars, like the Monetary Commission, and this is a proposition that any business man and farmer would know (how to organize these institutions) and it is not necessary to go to this expense when they have had the experience; and Mr. Herrick stated before this committee that the matter is now being investigated by the State Department.

The CHAIRMAN. Let me say on behalf of this committee, and let it go, if you choose, to the farmers of this country, that every interest touching farm life or the farming interests of this country this committee represents.

Mr. BURKETT. We all feel that this committee does try, as a rule, to represent the farming interests of this country.

Mr. HAUGEN. My contention is that the farmer pays for this commission just as much as the business man, and the farmers have an interest in the expenditures of this Congress just as much as anyone else. If you propose anything in the interests of the farmers, this committee will be very glad to assist you, but when it comes to

appropriating two or three or four hundred thousand dollars, that is a different thing; it is something which does not seem to me to be necessary just at this time.

Mr. BURKETT. I am perfectly willing for this committee to make the services of this commission gratuitous, or in any way you want to put it, or limit the amount to a certain sum, as you in your judgment may think best; but I think it is worth the experiment, just to see how the farmers take the appointment of one commission appointed to investigate one subject concerning agriculture.

Mr. HAUGEN. They have had several of them, my friend.

Mr. BURKETT. What are they?

Mr. HAUGEN. You can go back to the Roosevelt administration and find commissions galore.

Mr. BURKETT. We had a Commission on Country Life, but they had no standing with Congress.

Mr. HAUGEN. Do you know that this commission would have any standing with Congress?

Mr. BURKETT. They may not, but this one is so vitally back of what the farmers stand for that I know that they desire it, because, as I said, the gist of the letters, the resolutions, and everything they have done show they wish this subject investigated. I tell you, gentlemen, the farmers are red-hot for this resolution, and they do hope that Congress will start the machinery that will give us a real official investigation of this entire subject.

Mr. CANDLER. Suppose this commission is appointed, and they study the entire subject and come to the conclusion that this system of finance is a good thing and ought to be put into effect, what legislation would it be possible for Congress to enact? What jurisdiction has Congress to enact any law that would carry this out?

Mr. BURKETT. I do not know. That is just why I want the commission. Let this commission come back here, and then after they have thoroughly studied this subject, let them make their recommendations, and then get the point of view of the consuls and all those people, and we will get some place, and we will get something good out of this system that will be practicable.

Mr. CANDLER. I asked the question in order to get the benefit of your opinion as to the kind and character of legislation that may be enacted. You seem to have studied the question very thoroughly, and I wanted to get the benefit of your opinion.

Mr. RUBEY. You said a moment ago that the Commission on Country Life appointed by President Roosevelt had no standing with this Congress. What did you mean by that? Why did it have no standing with Congress?

Mr. BURKETT. Not this Congress; the last Congress. It refused to make an appropriation to publish the report, and the report was ignored. But I am not going to discuss that.

I wish to thank you, gentlemen, for your very great kindness in listening to me in this matter, and I desire simply to leave a final word with you, that the farmers very humbly beg of this committee to give this matter very careful consideration. I am simply the spokesman for them in this matter and simply represent the public opinion as it concerns them.

STATEMENT OF HON. GEORGE W. NORRIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA.

Mr. NORRIS. On account of the very limited time, gentlemen, that I can have here—I have just left a hearing before the Judiciary Committee which is very important, and I desire to get back as soon as possible—I hope I may be permitted to proceed until I have stated an outline of the argument I wish to make, without interruption; and then I would be glad to have any questions that any members of the committee desire to ask.

I wish to speak particularly with reference to House joint resolution 282. The gentleman who has preceded me has not referred to this resolution. It is the first resolution introduced in the House of Representatives on this subject and was introduced by me on the 28th day of March; although it is along the same lines as all the other resolutions which have been mentioned.

I take it, gentlemen, that the most important subject of legislation, and the most important subject that Congress or any other legislative body can consider, is to devise some way by which life on the farm and in the country may be made more profitable and more enjoyable, in order to prevent the rising and coming generations from leaving the farms and coming to the cities. One of the worst things, to my mind, that has been brought to the public attention and the attention of the world by the last census we took in this country was that population in the city has been increasing and the rural population has been decreasing. Some of the best farming communities in Iowa and in Nebraska have actually lost in population in the last 10 years. The stability of government, and not only of our Government, but the happiness and prosperity of humanity, ought to be and will be preserved in the best way by the reverse of this condition being brought about, if possible.

Everyone knows that it is in the overcrowded cities where crime is bred, and where the hotbeds of immorality exist, and that it is out in the smaller cities and in the free air of the country where patriotism exists in its highest developed state, and the very necessities of the case make it almost absolutely necessary that something should be done to prevent the decreasing of the population where we ought to have it increased.

One of the things, it seems to me, that ought to appeal to us therefore, is that while we are appointing commissions on all manner of subjects and giving them various powers and duties, we have rather neglected anything looking to the betterment of the rural communities and the advantages that should come through a better and higher life in the country. We have sent all over Europe a commission appointed to investigate the monetary situation. They had access to all the libraries and all the books and all the reports of the world, and it is said that the result of their investigation has made a wonderful addition to the literature of the world on this subject. Without expressing any opinion one way or the other, I presume that is true to the student of banking and currency.

This is a proposition to have an investigation made for the benefit of the farmers, not conducted by the bankers, not by the lawyers, but by the farmers themselves. In the resolution I have introduced I have specifically provided that it is the duty of the President to make these appointments without regard to politics and that the appoint-

ments must be made of actual farmers and men engaged in agriculture. I will not have time to go into a discussion of some of the means of credit that exist in Europe, but I have studied and read a great many volumes and a great many articles on the subject. Because of the short notice I have had, however, and the other work I have been doing, I have not been able to get this matter together for this hearing.

But the facts are that the best security in this country, the foundation of all prosperity and all security, is land. It ought to command in the marts of trade the lowest rate of interest of any kind of security. We know that farm mortgages are not liquid. The farmer, although he has the best security on earth, can not get money for 30, 60, or 90 days, or for three months or for six months, at as low a rate as the merchant can perhaps get it, because his security is not liquid. The farmer, who can least afford it, who has raised his crop of wheat or corn, or oats, or cattle, is compelled to sell on the market, no matter what it is. The farmers who sell wheat, or a very large percentage of them, are compelled to sell when the market is lowest, because they must have the money to meet the emergencies that surround them. The wheat and corn, and the products of the farm, are bought to a great extent by speculators, and after it is out of the hands of the farmers who produce it and should have the benefit of every particle of its value, the speculator on the board of trade or the gambler gets the benefit, because he can hold it until the price goes up.

I am not here to say that this resolution will result in all I hope it may. Something has been said, in the way of questions that I have heard since I have come into the room, as to whether we can obtain all this information from the books. I have gotten everything over here in the Library that I was able to find, or the men in charge were able to find for me; and while I know that these cooperative institutions and societies have been in existence over in Europe for quite a number of years, and have been wonderfully successful in bringing about successful farming and a lower rate of interest, yet I am unable, from all I have read, to get any definite plan that would enable me to sit down and write a bill that would satisfy even me, if I was allowed by Congress to write one, that should be enacted into law. An investigation ought to be made by men on the ground, who are actual farmers and who are going there for the purpose of getting this information.

It will be found, undoubtedly, when an investigation is made that the conditions existing over there, being different from what they are here, there will be some difference, and you can not have, perhaps, the same scheme or plan that they have there. It might be interesting to you gentlemen for me to read a little from one or two volumes here that I looked up this morning, and which, in my study of the subject, strikes me might be interesting to you. I am going to read from Volume II of the Economic Review of 1892, on page 461, about the systems over in Germany. I am led to do this partly from the questions that have been asked. This is in reference to the Raiffeisen system. There are three systems spoken of by the writers mostly, and this perhaps is the most important once. The writer says:

My own attention was first called to these banks—with the Schulze-Delitzsch Associations I had been acquainted since the sixties—in connection with an in-

quiry in which I engaged, a few years ago, into the system of peasant proprietorship, as applied to very small properties—

I might pause to say that these banks and associations are organized among the poorest people, in some cases by renters, in some cases by landowners, and then they are called landschaften—

which prevails throughout the western half of Germany. The small peasantry system I found—on incontestable data—to have worked exceedingly well. But it had one bitter foe standing relentlessly in its way. For a long time its success had been not a little hindered by the want of capital, even for very small outlays, which drove the poor cultivators into the hands of extortionate money lenders, who have proved a veritable pest to that particular part of Germany.

I have read a great deal about the history of Germany along that particular line, and it is an exceedingly interesting history to see how these organizations have driven money lenders off the earth.

That hindrance is now, however, being successfully and completely overcome. The "loan banks" are turning the usurers, vanquished and defeated, out of the villages in shoals and raising up prosperity as with a magician's wand. One remarkable feature of the reformatory economic work accomplished is that its good results were practically all conjured out of nothing. It has been credit, not money, which has built up the splendid fabric. It is no wonder that the system is being copied elsewhere—that Austria has readily adopted it, that Switzerland and Italy, to a moderate extent, even Russia, have transplanted it upon their own soil, and that Belgium and France are at any rate grafting its best features upon their own local credit institutions.

I wish to read a little further about this system from the same volume, on page 468.

Mr. HAWLEY. What does Raiffeisen mean?

Mr. NORRIS. It is the name of the man who invented the system.

Now, the question arises at once as to how the organizations are going to get credit, and immediately this question presents itself, Shall every man be liable for a debt of the entire organization? and that is one of the questions that they had to contend with there. It will be one we will have to meet, and I confess it shocked me when I first read about the unlimited liability of most of these organizations, although not all of them have an unlimited liability:

However, Herr Raiffeisen is not the only cooperator who has come to the conclusion that in Germany at any rate no other method is admissible. Herr Schulze-Delitzsch accepted it as fully. And from the fact that of 3,467 cooperative credit associations in existence in Germany in 1890 there were but 41 with limited liability, and of 6,777 cooperative associations in all only 181, it may be inferred that public opinion has become generally reconciled to the principle.

Mr. WICKLIFFE. How old is this system in Germany?

Mr. NORRIS. I can not say.

Mr. CANDLER. It was started in 1860, I think.

Mr. WICKLIFFE. Is Herr Raiffeisen still living?

Mr. NORRIS. No; he is not living. Perhaps I can find it for you here.

Mr. WICKLIFFE. I do not wish to interrupt you.

Mr. NORRIS. This is entitled "People's Banks," and this is an article written by Wolff:

In brief outline the system upon which Raiffeisen's practice is based is this: Raiffeisen begins by confining each association to one particular district—a parish by preference, but if one parish be too small (he does not favor districts with less than 400 inhabitants), and if the matter can be conveniently arranged a union of two or three. Within these narrow limits members are elected on application, with great care and discrimination, by those who have already joined. The object is not to secure a large roll of members, but rigorously to

exclude everyone who is not really eligible. That done, the association is organized on entirely democratic lines. No difference of any sort is recognized between poor and rich, except that the better to do, bearing the brunt of the liability, are by accepted understanding allowed also to take a leading part in the administration. Both on the committee—in every case consisting of five, and charged with all the executive work—and on the council of inspection—consisting according to the size of the districts of from three to nine members, and intrusted with checking and supervising the committee, overhauling all that it has done at least once a quarter—it is understood that the better-to-do members (without a sprinkling of whom Raiffeisen would, if possible, have no associations formed) should be in a majority. It may be worth pointing out that the minimum number of members to form the council of inspection has been recently reduced from six to three.

And they supply such personal credit by the simple process of borrowing and lending—borrowing on the credit of the society in order to dispense credit to its members. As the rules were originally framed no member was asked to pay down anything on joining, either for a share or for entrance fees. To the present day entrance fees are not permitted. With regard to shares the legislature has, by its law of 1899, overruled the accepted regulation and insisted that there must be shares. The Raiffeisen associations met such a dictation by making their own shares as small as possible, generally 10 or 12 marks, at most 15 marks, payable by installments. Raiffeisen advisedly would have no dividend, because there is to be no direct profit, and because dividends make people greedy. Once more the legislature overruled him. However, the members of the village banks have voted all their dividends away.

And so it goes on.

My idea, gentlemen, is that after these systems have been thoroughly studied, by the necessary changes we can devise a plan here (perhaps not national; perhaps it would be found in the end that it would be the subject of State regulation) that would benefit the State, and the laws would have to be passed by the State legislatures. But in this country, where we have a better well-to-do farming class than they have in Germany, and a great many of the difficulties they have overcome over there do not really exist here, because from these organizations we could form here with proper laws enacted, it seems to me we could easily devise—for instance, with a body of farmers raising wheat and corn we perhaps have a fellow that is well-to-do and would have money to lend, and he would loan it to the society, perhaps, knowing it is perfectly secure; and when the society is organized its securities will be as good as Government bonds and a great deal more liquid than any county, township, or school bonds could possibly be, because the men behind them, a good share of them, will be moneyed men and will be, themselves, perhaps, investors in these very bonds. It is supposed in an organization under the law, that the law will provide for the bonds to be reenforced by the executing of the proper kind of conveyance of title, the title perhaps to go to the society, and perhaps the law might provide that the borrower should still retain possession by filing the necessary papers in some public office to give notice to the world. That is one of the details. Now, when it comes to borrowing money out of this society, I may be as poor as Job's turkey, but I raise a thousand bushels of wheat. That is something that is always worth a market price, and you could lend to me on that wheat enough money to tide me over an emergency which I wanted to pass, while the price was low, at a very low rate of interest, because the security is good.

Mr. HAWLEY. I thought the loans were made on real estate?

Mr. NORRIS. Oh, yes; under the landschaften system, but under the raiffeisen system they are usually made on personal property; but I as speaking of a sort of a modified law of some kind that we would

have here and giving you an idea of what I think is possibly why it would be that this loan to me would be cheap and why you, as an organization here, would be able to go into the money markets of the world and get lower money than any other class of people on earth, and the result would be that over the entire country, instead of wheat going down just after harvest, when the farmers are ready to furnish it, the market would be steadied, for the reason that farmers could hold their wheat and the market would thus be equalized.

If the price went down too low the farmer would be able to hold his wheat until the price went up and we would not have the gambling on boards of trade in the products of the farm that we now have. And what I have said of wheat could be said of corn and cotton and every other product of the soil.

This is a proposition to send men from our country, who are farmers, to make this investigation. I want to say one word in regard to the parliamentary situation of these bills. Senator Gronna introduced a joint resolution in the Senate, which has been passed by the Senate and brought over here and is now before this committee. On the 28th day of March I introduced my resolution on the subject (H. J. Res. 282), and on the 16th day of April Mr. Lever introduced House joint resolution 294. These two House resolutions and the Senate joint resolution are all along the same line and there is not very much difference in them.

Mr. WICKLIFFE. On what day was the Senate resolution introduced?

Mr. NORRIS. That was introduced before either one of the House resolutions. I do not know the date, but he introduced his resolution a few days before I did mine, because I was in conference with Senator Gronna on that resolution and had several conferences with him in regard to it. While I think there are some details in the resolution that I have introduced that are superior to either one of the others, authorship would not weigh with me, and I would be very glad to support either one of these resolutions. However, I wish to call attention to the parliamentary situation.

If my resolution or Mr. Lever's resolution were reported by this committee to the House and passed, the regular procedure would then be, when the resolution reached the Senate, to refer it to the standing committee of the Senate, whereas, if the House passed Senator Gronna's resolution it would not be necessary for it to take this procedure. If we amended the Gronna resolution in the House and sent it back to the Senate it would then be in order, under the rules of the Senate, for a motion to be made on the floor of the Senate to concur in the amendment, and if the Senate did this it would go at once to the President for his signature. Therefore, to expedite the matter as much as possible and to take advantage of the parliamentary situation, I hope this committee will take Senator Gronna's resolution as a basis for action and amend it as you think, under all the circumstances, it ought to be amended. If, for instance, the entire resolution after the enacting clause were stricken out and my resolution were inserted as an amendment, or Mr. Lever's resolution were inserted as an amendment, and in that shape it passed the House and went to the Senate, it would be in order to move to concur in the amendment and thus end it, as far as Congress is con-

cerned. As I have said, I have had several conferences with Senator Gronna. He will be perfectly willing if we amond his resolution in any reasonable way, even though we struck it all out after the enacting clause and inserted one of the House resolutions, to move to concur in such amendment as soon as it reaches the Senate. There is perfect harmony existing between Senator Gronna, Mr. Lever, and myself as to our respective resolutions. We have our individual ideas as to the specific statements that should be contained in the resolution, but any of us would be satisfied with any one of the three resolutions or any combination that could be made out of the three, and I ask of this committee expeditious action. I hope that this resolution may become a law before the adjournment of the present session, and I therefore, on account of the parliamentary advantages, ask that the Gronna resolution be used as a basis for action.

Mr. HAWLEY. You are a lawyer, and I wish to ask you this question: Is this a matter that the Congress of the United States can legislate on, or would the legislation necessary to put the schemes into effect have to be enacted by the States?

Mr. NORRIS. I am, frankly, inclined to say to you that the legislation that would come would perhaps be State legislation, although Congress does have power to legislate the same as it does for banks and might constitutionally pass a law. While that is true, however, the information we get will be for the benefit of the entire country, and I think Congress can well afford to spend money out of the Public Treasury, even though after we get the information the laws would have to be enacted by the States.

Mr. MCLAUGHLIN. Do you think that Congress might cover this by amending the national-bank act?

Mr. NORRIS. That might be. One of the reasons I introduced the resolution I did was that I wanted this investigation made and the information brought back to the United States before we passed or enacted any law on the banking and currency matter, because it might be a matter to be considered in connection with that.

Mr. MCLAUGHLIN. If it is possibly true that this could be brought about by amending the banking law, why do you insist on farmers being on this commission? Of course it is directly for the interest and benefit of the farmers and agriculturists of the country, but is it not a banking proposition and a great big business proposition?

Mr. NORRIS. It is a banking proposition and a farmers' proposition.

Mr. HAUGEN. And the bankers are in back of it?

Mr. NORRIS. No, sir; the farmers are in back of it.

Mr. HAUGEN. The bankers were the ones who appeared before the committee.

Mr. NORRIS. I hope the bankers are also in favor of it; but it seems to me it is a farmers' proposition, and the investigation, to get the proper information, ought to be made by farmers.

Mr. MCLAUGHLIN. When a farmer organizes a bank, he becomes a banker just the same as a lawyer who organizes a bank becomes a banker.

Mr. NORRIS. But when these banks, or rather credit associations, are organized by farmers, these men will still be actual farmers. I do not believe "bank" is a good name for these cooperative credit associations. Banks accept deposits and make loans, and these asso-

ciations do not do that. They deposit their funds in other banks and borrow money from other banks.

Mr. RUBEY. They are property associations?

Mr. NORRIS. Yes; they are property associations.

The CHAIRMAN. Right there: Do you not thing the legislature of your State could now, under the laws of this country, inaugurate something like this?

Mr. NORRIS. To be frank with you, I think they could, but to do it intelligently they should have more information.

Mr. WICKLIFFE. Has it ever been tried in any of the States of the Union?

Mr. NORRIS. Not that I know of.

I wish to read here a resolution from an organization of farmers in my State. I have a letter here from the secretary of the Nebraska Farmers' Congress, which says that the Nebraska Farmers' Congress held a meeting on April 16, 1912, at Broken Bow, Nebr., at which meeting this resolution was passed:

Whereas the capital invested in agricultural pursuits in the United States does not return more than one-third of the rate of interest that the farmers have to pay when they borrow money: Therefore be it

Resolved, That we favor House joint resolution 282, introduced by Hon. George W. Norris, providing for the appointment of a commission to investigate and report upon the plans and results of the German Raiffeisen system and all other European systems of rural cooperative credit associations, and also investigate and report upon the probable practicability of the application of such systems to American conditions.

The secretary says this resolution was unanimously passed and sent to me with the request that I submit it to this committee.

I believe that everywhere in the United States if you will find a farmers' organization you will find a body of men in favor of something of this kind, because there are evils and there are inequalities against the farmer that have always existed in this country which the farmer understands and that I think we all understand. Here he is with the best credit on earth and unable to borrow money in the money markets of the world. This is simply a plan to investigate and see if we can not devise some scheme by which he will be able to get money at a rate which corresponds with the security he is able to give.

Mr. MCLAUGHLIN. You spoke of the farmers lending their money to such associations as this: If the associations are going to do any considerable amount of business, they can not rely on the amount of money loaned by the farmers?

Mr. NORRIS. That is true.

Mr. MCLAUGHLIN. They have got to go out into the world and get money.

Mr. NORRIS. That is true.

Mr. MCLAUGHLIN. Then this must be a plan that will appeal to the bankers and business men of the country.

Mr. NORRIS. They must appeal to the financial men and they must present a scheme so as to say to the financial and business men, "Here is security for your money that is better security than you get when you buy county, State, or school bonds."

I desire to say in this connection (I did not say it before, because I will have to modify it with the statement that it may not be true) I read in the newspapers not long ago where one of these farmer

organizations in Europe sold some of their bonds, I think, in the city of New York?

Mr. HAWLEY. How much do you expect the interest will be?

Mr. NORRIS. I could not say that, you know. My own idea is that they will be able to borrow money at 2 per cent.

Mr. HAWLEY. State, county, and municipal bonds were offered to us on a basis of 3¼ per cent.

Mr. NORRIS. These bonds will command, in my judgment, basing my opinion on what I have read about Germany—they will sell at a lower rate of interest than that.

Mr. HAWLEY. What would be the inducement for these men who have money to buy them when they can buy State, county, and municipal bonds, absolutely secure, on a basis of 3¼ to 4.85?

Mr. NORRIS. I might put the same question and ask what inducement there is for the man to buy those bonds at 3 per cent when he can go out in the market and buy farm mortgages at 5 per cent.

Mr. HAWLEY. The bonds, however, are all liquid and have an exact market.

Mr. NORRIS. Exactly; but they are not as liquid as these bonds will be.

The CHAIRMAN. If my colleague will permit me to say, really this is not exactly germane to the issue in court.

Mr. HAUGEN. I wish to say to the Judge that I believe that some scheme could be devised, some safe, sound scheme; but the question in my mind is, Is it necessary to spend several hundred thousand dollars for a commission? And when I speak of spending several hundred thousand dollars I speak of other experiences we have had with commissions; and the people in my part of the country feel that we have been spending too much money for these commissions. My contention is that we have just as much brains and men with just as much experience in this country as in any other country, and they are able to work out a scheme of this kind. It is exactly along the same lines of corporations and we have thousands of them in the various States.

Mr. NORRIS. I think we could. I think we could sit down around this table and draft a law, but we would find out later that a good many amendments were necessary. And would it not be better to be able to draft that law after an exhaustive study over there on the ground where these credit associations have been tried for years?

Mr. WICKLIFFE. Could we not put a translation of their laws in the record?

Mr. NORRIS. Yes; but the laws vary. The organization, even, of the Raiffeisen system varies. They have worked out a plan where the first organizations will in turn combine and make larger organizations and so build up the head of a great institution almost national in character.

The CHAIRMAN. Permit me, right there, to suggest that if you will go before your State legislature and make the speech you have made here this morning and give any data that you can, your State legislature will put a plan in operation. Now, I am going to take Gov. Herrick's statement and all the information I can secure from our State Department, and when our next legislature assembles I am going to place that information before it.

Mr. NORRIS. But you should not have your legislature and my legislature to bear this burden, which is national in character.

Mr. HAUGEN. Ex-Gov. Herrick stated it was not a national issue, but it is for the States to work out.

The CHAIRMAN. Yes; I talked with him along that line.

Mr. HAUGEN. And I am at a loss to know why Congress should now provide for a commission. It is probable that they could furnish valuable information, but I am a little prejudiced against these commissions.

Mr. NORRIS. My own idea is that this matter is of interest to all the States generally and the Federal Government ought to bear the expense of getting this general information and then let the States have it. We have spent thousands of dollars for the investigations of the Monetary Commission; why not spend a few dollars to make an investigation for the benefit of the farmer, who is the real source of all prosperity. Make him prosperous and happy and the whole country will prosper and the whole world will be happy. I ask for the farmer nothing but what has been granted to the banker, nothing unfair, nothing in the world but a square deal.

STATEMENT OF HON. ASLE J. GRONNA, UNITED STATES SENATOR FROM NORTH DAKOTA.

Senator GRONNA. Mr. Chairman, I shall be very brief. I had a talk with one of the members of this committee, Mr. Lever, the other day, and he said you was to have a hearing on Senate joint resolution 75 and that certain men would appear before your committee. I am sure that they have given you perhaps more information than I could give you. I am not going into the methods of what this proposed resolution would do, or, rather, I am not going into detail and show what system should be adopted.

I introduced a resolution in the Senate and it was passed by the Senate. It had the hearty support of such men as Senator Burton, who is a member of the Monetary Commission, and he admitted on the floor of the Senate that this was a matter that the commission had overlooked or one not gone into to any considerable extent, and that it was important that we should have a commission that would investigate and report to Congress upon the rural credit banks in other countries. And when such men as Senator Burton, who is a student of finance, agrees that before we adopt a monetary system in this country we should have this commission, I take it we ought to pay some attention to it.

I am not going to answer some of the questions that have been propounded here, but I wish to say this: That, so far as the Federal Government is concerned, we do not propose by this resolution to invade the rights of the States. We have all the right under the Constitution to do whatever is beneficial for the people so long as we do not invade the rights of the States, and we do not propose to do that by this resolution at all. We are proposing to expend $30,000 for the appointment of a commission, and that commission ceases when they make their report and they must make their report to Congress inside of one year. They could not possibly expend any more money than the $30,000. As a practical farmer, and I might say as a practical banker, I know that the farmers of this country pay

too high a rate of interest and the banker is not to blame for it. We are operating under a faulty system. Money is being loaned on real estate in one section of our country at from 4½ to 5 per cent and in other localities, where the lands are more productive and the security is just as good, the farmer pays from 8 to 12 per cent, and only so because he is unable to reach the capitalist and secure money at first cost. If we can teach the farmers to cooperate, they can make their mortgage bonds so significant and attractive that in our money markets they will vie with Government bonds the same as in Germany and other countries where the cooperative system prevails.

Mr. WICKLIFFE. About what rate, Senator, if you will permit a question, there, do the Government bonds of Germany bear—those for which the faith of the German Empire stands pledged? What rate of interest do they bear?

Senator GRONNA. They bear 3½ to 4½ per cent.

Mr. WICKLIFFE. They bear about the same, then, as these Raiffeisen system bonds?

Senator GRONNA. Yes; what we call the Landschaften bonds. There are so many systems. That is why we would like to have this commission to investigate these systems, but I am not going to worry you by taking up in detail the Raiffeisen system. I have studied it and read everything that I possibly could get hold of in the Library (which is not very much), and I have read pamphlets that have been sent to us by the Agricultural Institute of Rome, so I know something about the Raiffeisen system and the Schulze-Delitzsch system—what you call the Landschaften system, the Credit Foncier system. I know something about the Hypothik banks of the Scandinavian countries, but I do not think you will find the information we want. This resolution was introduced by me in the Senate for the purpose of getting some information as to which is the best way to proceed.

Mr. TALCOTT. Senator, do you consider it possible to obtain this information in a comprehensive study here, without sending a commission or some members that far?

Senator GRONNA. Absolutely not. You might just as well say if you had a boy you desired should become a lawyer that you could go and get the books and let him read them. You must appoint men that have ability and who are interested in this, men who will do their duty and go through and study it and come back and make a report. The United States Government owes it to the people and it owes it to the States.

Mr. TALCOTT. Is this system in practical operation?

Senator GRONNA. Yes; it is in practical operation. We do not propose to interfere with the banks. The bankers are not going to be the losers by this system; it is going to be a direct benefit to the bankers. But, as I said, I am not going into details now.

Mr. HAUGEN. I would like to know what you mean by that, Senator. The bankers are the only ones that have been before us agitating this system.

Senator GRONNA. The bankers ought to be just as patriotic as any other class of men.

Mr. HAUGEN. They are the only ones who have appeared here; there have not been any farmers before the committee.

Senator GRONNA. I am a farmer; I am one of the largest individual farmers in this country; I do not think anyone will deny that. I

work with my hands on the farms, the same as any other farmer works, and I know the needs of the farmer as well as any other man in the country. I know something about the conditions in the South. You are operating on a credit basis in the South, the same as we are in the Northwest—a ruinous system. The money costs the people too much; not only the farmers, but the merchants and bankers themselves.

What I would propose would be this, and I believe when the commission makes its report it will be to this effect: The farmers will organize and cooperate; they will syndicate their properties, and that will make their securities not only good, but so desirable that they can obtain money at first cost—something that no farmer has ever been able to do in the United States. There is no question but what their securities are not now good on the American markets, but no capitalist is going to take a $500 or $1,000 mortgage at a low rate of interest. My friend Haugen knows that as well as anybody else. If the farmers would borrow money in large sums, they would get it at a much lower rate of interest. They will apply to the banks that have money and borrow large sums. The cost of distributing it will be practically nothing. It will be done almost gratuitously, with very little expense, the same way as mutual insurance companies are operated to-day; and you gentlemen who are members of this committee know of the mutual insurance companies in your own States, perhaps in your own counties, and know they are successful. No banker can afford to go out and investigate any borrower to find out what a man's character is and what his standing is without expense. These credit unions will collectively become responsible for this money, and they will pledge their securities jointly, and in that way get cheaper money.

Mr. McLAUGHLIN. Senator, you have spoken very interestingly, as others have, and they have said a good deal about the rate of interest—that this would enable the farmers to loan money at a much lower rate of interest than any other plan offers. That is all right, but no one has spoken of the great advantage to the farmer of being able to borrow his money on very long time. The farmer hesitates to mortgage his farm, even if he can get his money at a very low interest, if the time of the loan is short and he has no assurance that he will be able to renew it, and he may be unable when the time expires to make payments. Under this plan I understand mortgages will be made for a long time, and that is very attractive and very helpful to the farmer. Is that involved in this plan?

Senator GRONNA. I do not know, as I stated in the beginning, what system will be recommended; but I take it when they sell a 20-year bond they will be able to sell it at a lower rate of interest than a 10-year bond.

Mr. McLAUGHLIN. That would not make any difference. It would be the terms of the mortgage that the individual would make to the association. Would mortgages of that kind be made for a long time? Of course the bonds would have to be made on a long time.

Senator GRONNA. We will say that you and I are farmers, and we agree to pledge our farming interests for a certain amount of money, and we issue a bond. I can not see any reason why you, if you want to pay up your mortgage, could not pay that off, and some other man would be taken in. If you were helped along, and whenever it

was possible to pay off your debt you would pay it just the same as now, and some other man, more unfortunate than you, would be taken in and given the benefit of this money.

The CHAIRMAN. It seems to me, Senator, that is the same plan that the well-to-do farmers have in communities that have cooperative banking interests. I think it is a very good thing, and I told ex-Gov. Herrick so.

Mr. HAUGEN. Mr. Chairman, it is exactly the same as the guaranty of bank deposits. It is a corporation; that is all; and we have so many of them in this country (we have more of them, perhaps, than any other country in the world) that I can not see the necessity of sending a commission all over this world at the expense of $5,000 a year for each member.

The CHAIRMAN. The committee will discuss that in executive session.

Senator GRONNA. Mr. Chairman, I have not gone into the details, but I feel Congress owes it to the people of the United States to spend at least $30,000 to find out about the system in operation in the older countries. It is said that our bankers have as much brains as any others, and perhaps they have; but I want to say that we can learn a good deal from Europe, even in the method of farming. We do not produce as much per acre as they do in Europe, because we have not gone through the same schools and system they have in Europe, and even in the matter of production we can learn from Europe; and $30,000, it seems to me, is an infinitesimal amount and no man can be harmed by it.

The CHAIRMAN. You know, Senator, that $30,000 is a mere bagatelle, but a great many such sums would make quite an amount.

Mr. MCLAUGHLIN. Senator, we have been told that the State Department is making an investigation. Do you know anything about that?

Senator GRONNA. I do not know that they are making an investigation. I have read in the agricultural papers a letter from President Taft stating that he indorses this resolution and he will be very glad, if the resolution is passed, to sign it.

I thank you for your attention.

Mr. WICKLIFFE. I would like to ask you this one question. What is your judgment as to the personnel of the members of the commission, should such legislation go through? Do you think that the majority of them ought to be farmers; would not that be better?

Senator GRONNA. No; I do not think so.

Mr. WICKLIFFE. I do not mean all farmers, you know; but the majority of them farmers.

Senator GRONNA. I believe that we could find men among the farmers that would be a credit to a commission of that kind; put one or two of them on if you wish, and then take business men—bankers—whoever you please.

Mr. WICKLIFFE. Do you not think it would be better if the resolution should specify that at least two out of the three should be practical farmers? That would still give the bankers representation on the commission.

Senator GRONNA. A man might be a practical farmer and yet not be able to do justice to this matter.

Mr. HAUGEN. Would it not be as satisfactory to direct the State Department or some one to make this investigation, and thereby obviate the necessity of appointing a commission?

Senator GRONNA. It would not be satisfactory to me and I do not think it would be satisfactory to the people of the country, because there must be some strong arm or some strong force to do this.

The CHAIRMAN. Let me say to my colleague that we will discuss this in executive session.

Senator GRONNA. If there is no further question you desire to ask, I wish to thank the committee for their attention.

Thereupon, at 12.15 o'clock p. m., a recess was taken until 2.30 o'clock p. m.

STATEMENT OF MR. G. GROSVENOR DAWE, MANAGING DIRECTOR SOUTHERN COMMERCIAL CONGRESS, OF WASHINGTON, D. C.

Mr. LEVER. I wish to introduce Mr. G. Grosvenor Dawe, managing director of the Southern Commercial Congress, of Washington, D. C., who has studied this question closely and will give the committee the benefit of his investigation.

Mr. DAWE. Mr. Chairman and gentlemen, in the hearing this morning, naming no names, there was really an unfortunate lack of information on the subject, because instead of it being necessary to go back to 1892 and learn anything regarding European systems of cooperative credit, there are 16 volumes in existence, through the generosity of the Congress of the United States, those volumes being published by the International Institute of Agriculture, which depends upon you for its maintenance or membership. I just brought two volumes this morning, one is the fifteenth volume, which is a bulletin of the Bureau of Economical and Social Intelligence, and the first of the two volumes treats of the subject, containing monographs on agricultural cooperation in the various countries. These I would rather not leave with you, because they belong to myself. There is also in existence this small pamphlet, that summarizes in effect the 16 volumes, and that small pamphlet will take a man's time for perhaps two hours to see exactly what has been done in the European countries and the tremendous effects that have been produced by cooperative credit.

Mr. HAUGEN. Do all these 16 volumes treat on this subject?

Mr. DAWE. All treat on the same subject.

Mr. HAUGEN. Cooperative plan?

Mr. DAWE. Yes, of the various European countries.

The CHAIRMAN. I supposed we could not find anything about it.

Mr. DAWE. They should be in the library.

The CHAIRMAN. Some gentleman this morning here said we could not.

Mr. DAWE. That is what surprised me. This little pamphlet, a copy of which I shall take pleasure in mailing from my office to each member of this committee, covers the whole subject as relates to Germany, Prussia, Austria, Italy, France, Belgium, and the very modern forms that have been worked out in Great Britain and Ireland. In fact, Ireland, in the last 15 years, through the activities of Sir Horace

Plunkett, has made adaptations of the older forms which were first started in Germany, and under those adaptations the real conditions of Ireland are being rapidly bettered, so it is more fortunate now to live in Ireland, perhaps, than in England.

The CHAIRMAN. Can you not get that information and give it to all these Members of Congress, and thus save us $30,000?

Mr. DAWE. I am leading up to that. Therefore, so far as the study of the mere outlines of effort is concerned, that study has already been made, but it has not been made on the ground by men who would be charged afterwards with interpretation. I shall hope to see this commission appointed. I shall hope to see it made up, not necessarily of farmers, but of men of broad vision relative to national needs, because it is not merely a farmer's question; it is a question of the national strength; for, under our system here as it is working out and as it was pointed out this morning somewhat, we are rapidly losing the balance between country and city. If we lose the balance, the country tips over; if we find a means of maintaining the balance, we strengthen the life of the country for all time to come, because we are only young yet; we have only just commenced to experiment. Therefore, if you will permit me to go back to what I was saying, the study of the subject has been made; it has been made by the International Institute of Agriculture, and the translation into English for use in this country was due originally to the generosity of M. Lubin, but the House, in its good judgment, within the past two months has actually provided for $5,000 for the translation into English of these extraordinary researches going on in Europe in the French language.

But the commission's duty as I see it—and you will, I trust, pardon me for saying "I"—but at our office we have been studying this matter very intensively—the duty of the commission is rather to find the adaptation that is needed. The methods are already in existence. The methods have been worked out and are working, but the question of adaptation to American life is a very vital one, for there are two or three conditions existing here that are not common to Europe. For instance, Capt. Lamb, we have so far a very unstable population. Cooperation in its highest degree is always among people who are members of a stable population, because they know one another. Furthermore, the agricultural problems of this country are not one, but are many. You take down in your State, Mr. Lever, and the question of raising cotton is altogether a different question from the raising of market garden stuff around Boston, and it is altogether a different question, both of them, from the question of Idaho, where the land has no value at all, or I will say parts of the West, where the lands have no value at all except you put so many inches of water on it per year. In other words, there is nothing paralleling our agricultural conditions in any condition in any country in Europe, because they are small by comparison. They are within certain fixed climatic conditions.

You will see, gentlemen, that our problem here is agitation, because we are one nation in effect, but in practice we are 48 governmental entities, and in each State there are certain State banking laws; there are certain laws relative to land transfers; there are certain laws covering negotiable paper. We have, therefore, in this country a problem different from the European one, and this commission, if

you would permit a suggestion from me, instead of its duties being narrow, I believe that its duties should be broadened to the effect that having made—if in your judgment you consider it necessary—a study abroad, it should then study the whole question of adaptations to the needs of the United States, for otherwise, when they do report back from Europe and report their findings on that which is already found there, even then you will have no practical step taken toward adaptation to the peculiar needs of differing portions of the United States with their different banking problems and their different negotiable instrument problems. Therefore, when the commission goes abroad, as I hope it will, because it is a fruitful topic for study, it should have the further duty of considering the relation of those studies to our needs.

Now, one point more. Somebody said in the hearing this morning that the Monetary Commission confessed that it had overlooked land values as an asset. There—if you will pardon me for emphasizing—there is the important part of this entire investigation, because while farm lands of the United States are now worth $41,000,000,000 and stocks and bonds are now worth $25,000,000,000, the actual money is something over $3,000,000,000 with which to carry on all the activities. That $41,000,000,000 worth of property has not legally one cent's worth of value for establishing credit, and this stir of interest and feeling throughout the United States, either commercial or uncommercial, is reaching toward a sane conclusion on the part of the United States as to ways and means whereby its real basic asset may be made available for the establishment of credit. At present that basic asset is not available for establishing credit, so that out of this agricultural community, if they report in some form or another—let us say resolution 294 here, because that, of course, is the best one under the circumstances—if they report No. 294 out, they are really taking the first steps in changing the entire rural financial condition of the United States, and there is where the commission has its importance, for until the chief asset of the United States, which is land, and the most enduring asset of the United States, which is land under cultivation—until land is recognized as having some relation to the financial problem of the Nation, such as we have left out of sight, just as the Monetary Commission did the banking. I went through their entire report. I think the mountain was in travail and brought forth two mountains. I think it is about 45 volumes. There are not two pages in all of that dealing with the very basic thing that the Europeans have solved long ago.

The CHAIRMAN. When you claim that lands are not assets of value. bases of credit, why, in all the counties of this country you will find deeds of record where men borrow money on land.

Mr. DAWE. On mortgage; yes.

The CHAIRMAN. Then, if you go around a zone of commercial centers, you will find, particularly in the last few years, that these farmers get money from their lands. In my county there are three or four banks.

Mr. DAWE. I am glad you have raised that point, Capt. Lamb, because——

Mr. LEVER (interposing). It is not a fact that the Federal Government would refuse to recognize land as an asset or refuses to permit loans by the national banks?

The CHAIRMAN. There have been some alterations in the law in that line; we have made some change, but I have not kept up with it exactly.

Mr. LEVER. They can not take land as security.

Mr. DAWE. The condition is actually this: That by the laws of the United States land, as such, can not be accepted as security in the United States banks. Now, the State banks in a large measure have followed that same method because of the supposed extra safety that was implied in the national bank opposing the lands as security.

Mr. RUBEY. The point is this: The national banks do not permit the loaning of money on real estate, not because it is real estate security but because of the fact that in making such loans the length of the time of the loan ties the money up, so if the depositor asks for it the bank would not be able to get it. That is the reason the national banks refuse to allow them to loan on real estate, not because of the lack of value of the securities.

Mr. DAWE. What is the effect?

Mr. RUBEY. I want to emphasize the fact that they do not put that on the ground that the security is not good security.

Mr. DAWE. It is not? No, it is the best in the world. It is dirt, and can not be moved.

Mr. HAUGEN. The comptroller will tell you it is the best security a bank can carry, but he will also tell you that the Government banks might be engaged in some wildcat scheme in loaning on worthless real estate, but everybody recognizes that the real estate security is the best security that can be had, and money can be had on real estate security at the lowest rate of interest. Speaking about farmers getting money, you can get money in my State at 5 per cent on real estate, and if you go to the bank you pay 8 per cent on commercial paper, and the only difference is the difference in the security; the better the security the lower the rate of interest is, and that will have to be the basis in this whole scheme. Nobody will contend here that you should form an organization and loan a large amount of money on worthless lands. The security must be there to begin with. If not, nobody would join any association of the kind. That is why we object to guaranteed bank deposits, because with a capital a safe bank is not supposed to guarantee the deposit of a bank that is not entitled to the deposit.

Mr. RUBEY. I do not wish you to understand that I am opposing the proposition. I am just stating the proposition as to why the national banking law does not permit the loaning of money on real estate.

Mr. DAWE. The effect is that money is not obtainable through national banks.

Mr. RUBEY. They do it in an indirect way.

Mr. DAWE. Yes; they organize a company and issue stock.

Mr. RUBEY. They go to work and have somebody else make the loan, then they loan the money to him and take his notes with the real estate as security, and the real estate is really the basis of his credit.

Mr. BEALL. In addition to that, while land is not recognized by law in connection with loans of national banks, as a matter of fact it is. I go to a bank in Texas. There is a custom prevailing there

if I borrow $1,000 I would be expected to give a note with somebody as security. Any man who owns more than 200 acres of land down there may become my surety. The bank looks at the responsibility of that man and determines very largely his responsibility by the amount of land he has. If he has 500 or 600 acres of good land his name is good for several thousand dollars in any bank, and in that way the land is taken into consideration even in transactions in the national bank.

Mr. LEVER. Yet on the face of it the man is taken into consideration, and not the land.

Mr. BEALL. It does not make much difference about what kind of a man it is if he has the land, but if he has not got the land he has not got credit in the national bank.

Mr. HAUGEN. The man with $100,000 worth of real property is better than the man with $100,000 worth of personal property. There is no question about that.

The CHAIRMAN. Of course they make their money by rapid exchanges and not by long loans.

Mr. LEVER. At the expense of the fellow who borrows it.

Mr. HAUGEN. Whenever you change the law and establish banks that loan money on real estate, you will divert hundreds of thousands of dollars to the country.

Mr. LEVER. And is not that desired by the country?

Mr. DAWE. It would be desired by the country, and I think the comptroller and the Secretary of the Treasury would favor it, but we have never been able to get it through Congress; but I think those who have been here for a while know something about the experience we have had—know something about the influence back of it.

The CHAIRMAN. We had that question up a few years ago.

Mr. LEVER. We have had it up every once in a while.

Mr. DAWE. Going back a little way, the bankers of this country are now studying this very question.

Mr. HAUGEN. They are the ones that introduced it here. The bankers came here with it, and Gov. Herrick was a banker.

Mr. DAWE. The American Bankers' Association has a committee——

Mr. LEVER (interposing). I do not like the record to show that the bankers handled this proposition. I do not know whether they handled it or not, but I want to say this: Gov. Herrick was before this committee on a different proposition, and incidentally gave to the committee the benefit of his studies on this proposition. Gov. Herrick was before this committee on my bill of agricultural extension.

Mr. TALCOTT. As I recollect, not another member of this committee touched on that.

Mr. HAUGEN. But it was arranged that Mr. Herrick should present the scheme. What difference does it make who it is? What is good for the banker is good for the farmer, and the only question here is, Shall we appropriate this money to the commission? My idea was this: Mr. Lever might possibly agree to have some department here investigate this matter, and it could be done at less expense and avoid the necessity of appointing a commission.

Mr. LEVER. I should be glad to have Mr. Dawe speak on that point.

Mr. DAWE. I invited Mr. Lubin over here from Rome, and he came to this country, and we had a week's study.

Mr. HAUGEN. We sent some people abroad to some international congress some years ago—the International Agricultural College at Rome.

Mr. DAWE. The International Institute. I want to say this: The stir of interest in the whole question of rural finance is one that this country should be fully advised of and I believe is in full sympathy with, because, as I stated earlier, we are losing the balance between country and city. If there is any way of studying out a method of finance that shall enable the farmer to secure credit on his character and assets like a merchant does, then we have the moving toward agricultural stability.

Mr. HAUGEN. I agree with you there.

Mr. DAWE. Whereas the trend from 1900 to 1910 has been toward the city. I think it jumped from 32 to 46 per cent of our urban population during that period, which is an appalling condition and closely related to the higher cost of living, I believe. Now, the bankers are stirring themselves in this matter because they recognize that only out of a prosperous rural territory can they expect a constant prosperous commercial life. The farmers are stirring to interest in it because they feel there is something wrong, although they do not know what it is. This commission, as proposed, is to study the methods that have been worked out in Europe, and then I hope to translate those into adaptations, as, for instance, in your State, Capt. Lamb, with perhaps the judicial district as the unit, there might be worked out a rural banking system. In other States it might be some voting precinct; but whatever they find out, when it is found out it has got to be translated into terms adapted to 48 variants. You can not escape that.

Now, the next thing is this: So far in the discussion to-day I do not think is has been set before you just exactly the difference between the conditions that have been worked out in Europe and the conditions that prevail here. It was not the farmers of Europe that worked out this philosophic scheme at all; it was the philosophers of Europe who worked it out as a means to securing agricultural stability. It is not necessarily the farmer who will work it out here. The method really enables the farmer to stand up side by side with the merchant and with the business man in ability to draw out money and throw it back. It is a very different business from mortgaging his land in order to have money available. These little groups of men who secure by the sale of a bond on their joint holdings money perhaps equal to 10 per cent of the assessed value of their land are then in the position to hand out the money to each other. You will, we will assume, decide to-day that you want to put an extra lot of drainage in perhaps a wet spot on your farm. You want the money. You take it from your cooperative credit union. They give it to you. You pay just the percentage and a trifle more than the whole body of money has cost to secure. In other words, you are securing cheap money in your corporate capacity as related to all the other men in your vicinity and you are getting the use of that money with the full power of the whole body behind you at the cheap rate that that body was able to secure.

Mr. HAUGEN. Are you aware of the fact that that is being done in hundreds of instances here in America to-day?

Mr. DAWE. Not with farmers, sir.

Mr. HAUGEN. Any number of them. There are some cooperative banks in Minnesota, not on a cooperative plan, but incorporated, and making loans as you propose to make them, and issuing the bonds exactly as you propose to issue them, but there is no State back of them that is guaranteeing; they are simply incorporated under the State. We have them all through the Northwestern States. We have a number of them in my State.

Mr. DAWE. Cooperative banks?

Mr. HAUGEN. No.

The CHAIRMAN. The difference between that and this is the cooperative plan, is it not?

Mr. DAWE. It is cooperative, not for profit making.

Mr. HAUGEN. I think we have more cooperative organizations in the United States than in any nation in the world.

Mr. TALCOTT. That is the principle we want to introduce among the farmers.

Mr. BURKETT. They are not any good. They are not working.

The CHAIRMAN. Let Mr. Dawe get through, and then you may ask him any question you wish.

Mr. DAWE. Such a system goes back to the time of Frederick the Great in Germany. We only heard of it recently, therefore it is new to us. It is like the Jew who was jumped on by the Irishman. The Irishman said, "You killed the Savior." The Jew said, "I did not; that was 1,900 years ago." The Irishman said, "I only heard of it yesterday."

Now, these systems have been in operation, particularly the Landschaften system, since the time of Frederick the Great, and were systems evolved by conditions.

The CHAIRMAN. They whipped it into him?

Mr. DAWE. Yes, sir. The conditions which are producing the strain between rural and urban life in America are now becoming visible through the census report, and it becomes high time, therefore, for this Nation to at least have an open mind and see if possibly Europe may not teach us something; or, if it can not teach anything, it may at least point the road through which we may work out through our own genius the variant adaptable to our means, and the particular variant is that we are 48 entities, and not 1.

Going back to the illustration, if you want to put in some drains you draw out a little money. As soon as you have money available you throw it back. You have had the use of money during that time without any hindering strings upon it, or without any obligation to draw a larger amount only and use part of it; you have in effect become exactly as active in your handling of money as I would be with my check book in relation to the banks here in the city of Washington. If, however, on the other hand, you have to mortgage your property in order to get hold of money, when you do get hold of money you get hold of the money temporarily and in quantity more than you can use.

Mr. HAUGEN. You mortgage your land to the corporation?

Mr. DAWE. Yes, sir. The difference, therefore, between the method worked out in Europe and the money system as we have it in this country is that under the European system many men holding together bond for their land have funds available within their limits for monetary use, a throwing back—while the collective money is

available for the larger corporate impulses of that group, as we would say in this country in the erection of elevators or in the marketing of crops.

Mr. HAUGEN. But the members of the association mortgage their lands to the corporation exactly as they do here. You do not propose to go on without any security whatever, just simply forming a corporation and issuing bonds; you must have some security back of it, either by mortgage or trust deed, no matter what—it has got to be transferred some way to the corporation for security.

Mr. DAWE. But the moment that step is taken, which is an utterly different step from you mortgaging your land yourself to a trust company or money lender, it is a very different thing from you being grouped with 24 other landholders, we will say, in a territory somewhat homogeneous and having the same problems to deal with. That is a very different method when you are working with the others in the cooperative method needed to make a good marketing effort in relation to any crop you raise or any enterprise you want to go into. Now, the cooperative feature is a feature which must be borne clearly in mind. It is not a money-making method within the limits of the corporation.

Mr. HAUGEN. I fully agree with you in that. We have, then, all that with us now.

Mr. DAWE. You have not, sir.

Mr. HAUGEN. In the grain business and creamery business and store business and various other things.

Mr. LEVER. In everything except the land business.

Mr. HAUGEN. Yes.

Mr. DAWE. In everything except the land business, the basis of all.

The CHAIRMAN. If you will insist on asking questions, the chairman would like to ask one.

Mr. HAUGEN (interposing). We have the plans and all worked out. We had the building and loan association, that was cooperative.

The CHAIRMAN. With your knowledge now of this scheme, and of course you admit right on the face of it that it has got to be figured—with your knowledge of it could you not go down to any State legislature and explain as you are explaining here now the cooperative features and get those people, if they saw fit, to establish this cooperative system? Suppose all of us around here now had studied this question, as I see you have, would we not be in a situation where we could just go to our respective legislatures and tell them of the advantages of this thing? In other words, do you not know right now about as much of this scheme and its adaptability and its probability of working out successfully as this commission will know when they come back?

Mr. DAWE. It depends on the commission.

The CHAIRMAN. Exactly.

Mr. DAWE. When you have all the basic facts, and you have solved that from these 16 volumes, you have only prepared yourself to study adaptations; that is all you have done, because your State is different from Georgia, and Georgia is different from Alabama. They say they have got the model banking law there.

The CHAIRMAN. But the principles of the whole thing are the same. They can make them suitable to their conditions, their environments, so to speak; at least it looks to me so.

Mr. DAWE. I will then simply repeat what I began to do, to sum it up, that the study of this question is important because Europe has succeeded in giving stability to agricultural life; it is also important because you can not make an eclectic utterance relative to the whole United States, and you only know that when you have studied the whole situation. It is impossible to make an eclectic utterance that applies to 48 needs. The third point for your committee to bear in mind is this, that when you take the step looking toward improvement of the rural financial conditions of the United States you are really taking the most important steps that have yet been taken in the agriculture of the United States. The mere teaching of men how to raise more crops and then not showing them how to finance the business that they have developed, leaves them with the task half done. Rural finance, in the judgment of a good many men, is the base of this drift, or I should say the absence of rural finance, because the boy who comes in here and jerks a rope on a street car and gets $12 a week for it, if he gets full time, he actually feels $12 go through his hands, whereas the ordinary poor farmer under the poor financing method, particularly in the South, Mr. Lamb, and you know how poor things are financed down there, the poor farmer does not feel real money go through his hands. You solve the problem of active dynamic money in the rural regions of the United States and you have got right down to the basis of solving the whole problem.

The CHAIRMAN. Are we not now feeding our own people and helping to feed all Europe?

Mr. DAWE. With cotton.

The CHAIRMAN. With other things, look at our beefs; look at our various products at this end.

Mr. DAWE. I must remind you, and you will find it so, that in 1898 we exported $375,000,000 worth of foodstuffs and food animals, foodstuffs in crude condition. We have dropped to $103,000,000. Last year we imported foodstuffs in amounts twice as much as we imported 20 years ago. We are drifting toward the cities, and the people that are coming in from abroad are not feeding the country, therefore there is an appalling agricultural condition to be met, and the point where the great moves start relative to the Nation dealing with the problem is in this room, necessarily, because you gentlemen reach out and effect all national legislation affecting the agricultural problems of the United States. That is somewhat disjointed, gentlemen, but I believe you can spend $30,000 to advantage in this study.

The CHAIRMAN. Let me ask you a hypothetical question. Did Frederick the Great have anything of this sort on his mind? He did not himself start anything of this sort, did he?

Mr. DAWE. No; in his time the Landschaften system started. The Landschaften system is the system which involves the grouping of the greatest number of people; the Schulze-Delitsch system is what might be called the popular bank, and is somewhat similar to the building and loan idea which has been worked out in the United States; while the Raiffeisen system is the system dealing with small amounts, handed out to small people, and the means frequently coming from deposits rather than from the bonding and the loaning on the bond or the sale on the bond.

The CHAIRMAN. You have given this subject thought, as everybody can see. Do you not think this scheme can be worked out successfully

in this country without this commission, starting with our banking system and through our State banks, or supposing, as Mr. Haugen says, that we have got all this excepting the cooperating features, do you not suppose these people, when they can get this feature, can put the cooperative feature into operation?

Mr. HAUGEN. We have the cooperative feature in the building and loan, and I think you will agree that the building and loan in this country has been an absolute failure, at least Gov. Herrick told us so.

Mr. TALCOTT. It is not so at home, but they do not take any farm mortgages.

Mr. DAWE. Shall I send a copy to you gentlemen?

The CHAIRMAN. Certainly. Can I get those books in the library over here?

Mr. DAWE. They certainly ought to be there. They are the various reports of the International Institute of Agriculture. There have been 16 volumes issued, and scattered through those 16 volumes are remarks on the cooperative banking systems as worked out in Europe.

Mr. TALCOTT. Those volumes you quoted from were volumes 15 and——

Mr. DAWE (interposing). I did not quote from either. They have now summed up the stuff scattered through those 16 volumes in 2 volumes, called monographs on agricultural cooperation in various countries. Then, to make that still more convenient, they have thrown into a pamphlet of 62 pages, the very gist of the whole matter, as applied to every European country that has attempted it, France and all.

Mr. RUBEY. You say you will mail us each a copy?

Mr. DAWE. I shall be glad to mail you gentlemen a copy of that. It is basic.

Mr. TALCOTT. Did you take into consideration the necessity of $30,000 for the appropriation? Why was $30,000 the amount fixed?

Mr. DAWE. Are you asking me, sir?

Mr. TALCOTT. Yes.

Mr. DAWE. If you could have heard our discussions down in Nashville, you would have found out that we felt that a very much larger expenditure should be made, because what we thought was the wise thing to do would be the sending abroad of two men from each State of the United States, so each State would be represented by two thinking men who would, during the entire tour, be carrying on a process of elimination and rejection and enlargement, so there would come back to each State two men acquainted with their own State problems, ready to speak with authority from knowledge. But that is not the resolution which is before us. The value of that commission, or $30,000, or $300,000, depends absolutely upon the men who go; and if they are lame ducks who go—you understand what I mean by lame ducks.

The CHAIRMAN. I think so.

Mr. DAWE. If the commission is made up of men looking just for a $5,000 job, the commission might as well stay here. It has got to be made up of men who will work hard on the problem.

Mr. TALCOTT. Do you know whether the amount of $30,000 was fixed on any estimate?

Mr. LEVER. The Senate resolution originally carried an appropriation of $50,000. That was reduced on the floor of the Senate to

$30,000, and in my resolution I accepted the judgment of the Senate as to the amount of money necessary.

Mr. TALCOTT. But no estimate was made of the expenses?

Mr. LEVER. No; no estimate was made from any department of the Government at all; simply an estimate of men to study the question.

I should now like to present Mr. R. C. Milliken, of Texas.

STATEMENT OF MR. R. C. MILLIKEN, OF TEXAS.

Mr. MILLIKEN. I shall simply supplement the remarks of the gentleman [Mr. Dawe] who has just preceded me, as he has covered pretty thoroughly the land mortgage and rural personal credit societies of Europe. The Landschaften of Germany are the rural land mortgage companies; the Raiffeisen system are the rural credit societies, while the Schulze-Delitzsch system might be termed the industrial savings banks, similar to the mutual savings banks of New England. The Landschaften of Germany started, I think, in the reign of Frederick the Great, about 1746, and were organized to furnish credit to the nobility or large landed proprietors. It was something like a century afterwards that it was applied to the small landowners of Germany, and it was not until about 1862 that the Raiffeisen system of rural personal credit societies was organized.

In European countries they have specialized their credit institutions more than we have. That is to say, they have commercial banks, industrial banks, and agricultural credit cooperative societies. Their agricultural credit societies are divided into land and personal credit societies. Before attempting to discuss those rural or agricultural credit institutions I shall briefly state what is sound commercial banking, because the principles underlying it have been reduced to a science.

COMMERCIAL BANKING DEFINED.

The trading capital of a bank may be divided into two parts—the invested capital and the banking capital. The invested capital is the money paid in by the stockholders for the purpose of carrying on the business. This may be called the real capital. The banking capital is that portion of the capital which is created by the bank itself in the course of its business, and may be called the borrowed capital. There are three ways of raising a banking or borrowed capital. First, by receiving deposits; secondly, by the issuing of notes; thirdly, by the drawing of bills. If a person will lend me $100 for nothing and I lend that $100 to another person at 4 per cent interest, then in the course of a year I shall gain $4 by the transaction. Again, if a person will take my "promise to pay" and bring it back to me at the end of the year and pay me 4 per cent interest for it, just as though I had lent him $100, then I shall gain $4 by that transaction; and again, if a person in a country town brings me $100 on condition that 21 days afterwards I shall pay the same amount to a person in New York, then whatever interest I can make on the money during the 21 days will be my profit. This is a fair representation of the operations of banking and of the way in which a banking capital is created by deposits, notes, and bills.

Now, it is obvious that the first two mentioned kinds of banking are adapted to produce precisely the same effects. In each case a banking capital is created, and each capital is employed in precisely the same way, namely, in the discounting of bills or making loans. To the parties who have their bills discounted, it matters not from what source the capital is raised, the advantage is the same to them, the mode in which they employ the money is the same, and the effect upon trade and commerce will be the same. Let us suppose that in each case the banking capital created is $50,000. Now, the bank issuing its notes will have increased the amount of money in the country by $50,000. The bank receiving the deposits will not have increased at all the amount of money in the country, but it will have put into motion $50,000 that would otherwise have been idle. Here, then, is a proof that to give increased motion to money has precisely the same effect as to increase the amount. Here, too, is a proof of the ignorance of banking on the part of those writers who consider that the banks which issue notes are the sole cause of high prices, overtrading, and speculation, whereas it is obvious that if those effects are to be attributed to banking at all they may as fairly be ascribed to banks of deposit as to banks of circulation.

The foregoing remarks concerning commercial banking are forceful and I only wish I was the author of them. That is the language of the greatest philosopher of credit and the most successful banker of the last century, James W. Gilbart, fellow of the Royal Society. He did not content himself with conducting successful and money-making institutions for nearly 50 years, but it was largely through his personal efforts that the monopoly of the Bank of England was destroyed; and there is no sort of question but that he is the author of the present English banking system. He probably appeared before more parliamentary monetary commissions during the first half of the last century than any other person in the world, but his great work in giving to his country its present monetary system was not accomplished merely by talking to nonexperts, but by going into the English courts and fighting in the interest of sound banking and against monopoly.

Before concluding my remarks concerning sound commercial banking, as it is being practiced in Enrope—not merely in one European State, but in most European States—let me briefly direct attention to the six great and most disastrous financial panics which have been experienced in this country. The principal cause of each of those panics was speculation and overtrading, and the means to that end in each of those panics was a different credit instrument.

First panic.—Our first panic culminated in 1787, the time when the delegates assembled in Philadelphia to draft the Constitution, and the credit instrument employed was the "paper money" issued under authority of the State legislatures and Continental Congress. In 1780 $1 of Continental paper money was worth only 2½ cents; by 1781 it was valueless. Hence the phrase, "Not worth a Continental." Those great statesmen were not monetary experts, but many of them knew that the mother country had never placed its name to a piece of paper to pass current for money. They thought all our ills financial came from the evil practice of Government paper money, and therefore they refused to give Congress the power to continue such evil practice, by limiting its authority to "coining"

money; by prohibiting the States from "emitting bills of credit" or making anything a legal tender but "coin." That paper money was not the cause—but only the effect—of that panic following the Revolutionary War. Had that paper been issued to meet real commercial transactions and secured by solvent and convertible paper payable at short and fixed periods, then no possible harm would have resulted.

Second panic.—The second panic was in 1837; the cause being overtrading and speculation, just as it was after the Revolution, and the credit instrument employed was the bank note. Notes of the State banks and the second United States Bank. No thought was given to the convertibility of the security back of the vast majority of those bank notes. They were issued for the purchase of lands, and in many instances unproductive lands; and every monetary expert will admit that landed security is the most nonconvertible of securities, because land is less mobile than any other class of wealth.

Third panic.—Our third panic was in 1857, the principal cause being overtrading and speculation, and the principal credit instruments employed were bills of exchange and bank notes of the State banks. Bills of exchange, which are commercial credit instruments purely, were accepted for the purpose of purchasing real estate and other speculative purposes. The vast majority of the bankers of that day violated in the most flagrant manner the law of the convertibility of their security. My State (Texas) never had a bank of issue until after the Civil War, when national banks were organized there. The people would not accept paper money. When Texas came into the Union in 1845 bank notes were quite unpopular. The patriots who organized that republic and guided its destinies for nine years until we were admitted into the Union, as well as those who framed the first constitution for the State after it was admitted into the Union, were statesmen, but they were not monetary experts; yet we suffered from the panic of 1857. Bills of exchange were in general use, and they were accepted upon inconvertible security and for long periods of time.

Fourth panic.—Our fourth panic was in 1873, and most of you gentlemen know it was caused by the wild species of speculation following the Civil War. The credit instruments employed were our greenbacks and secured bank notes. The statesmen who inaugurated the national banking system were not monetary experts, and the real author afterwards admitted he was not concerned about monetary science when he had Congress adopt it. His only thought was financing the war, and as he knew much harm came from the abuse of bills of exchange before the panic, and being especially desirous of giving the highest market for Government bonds, he made it prohibitory on the part of those banks to accept bills of exchange. Not only is the acceptance of a bill of exchange a safe class of banking, but it is the very safest class; nothing will compare with it in safety. But if those acceptances represent anything but actual commercial transactions, are payable on long time, and based on inconvertible security, regardless of the solidity of such security, there is bound to be inflation of credit.

Fifth panic.—Our fifth panic was in 1893. There was considerable speculation preceding it, but the principal cause was the lack of confidence in the good faith of our Government to maintain the gold standard of values. Both political parties had been flirting with the

silver issue since 1878. In that year Congress was induced to put the Government in the silver-purchasing business, and when that term of purchase ceased the Sherman Act of 1890 extended it.

Sixth panic.—Our sixth panic was in 1907, caused by a period of wild speculation, and the credit instrument employed was the bank deposit. The twentieth century money in both the United States and in England is the bank check. No two countries have employed the bank check to the great extent of those two countries. The total bank deposits in this country in 1909 were $17,000,000,000. Think of that stupendous amount of our wealth being placed where it may be called for on demand and one can imagine the strain on our present credit system. I have already quoted from Gilbart, the great banker and philosopher of credit, that there is no difference in giving increased motion to money and increasing the amount of money. Henry Dunning McLeod, the great Scotch writer and thinker on this subject, in his History of Economics, page 400, says:

> A sudden increase of deposits is therefore nothing more than inflation of credit, exactly similar to a sudden increase of bank notes. Deposits are nothing but bank notes in disguise.

Let me illustrate the statements of those two great philosophers of credit with our own recent experience. Take the total deposits of our national banks for a period of 42 years—1867 to 1909. Their total deposits increased during the first period of 30 years from $750,000,000 to $2,000,000,000, whereas during the last period of 12 years such increase was from two to seven billion dollars. The average yearly increase during the first period was $43,000,000, as against more than $400,000,000 for the second period. The yearly increase of the second period over the first period was 793 per cent. Inflation has resulted in the use of those deposits for speculative purposes. There is a dreadful lack of liquidity and convertibility of the securities held by those and our other banking institutions in this country. Compare our banks with the Credit Foncier of France, the great land-mortgage bank or rather credit institution which has done so much for French agriculture. They don't call an institution lending money on land a bank in that country, and where they are permitted to accept deposits at all you will find such privilege limited, as it should be. A bank lending money on lands should not be permitted to accept deposits in excess of the paid-up capital, otherwise there is bound to be inflation.

Mr. HAUGEN. Do you want to be understood that the deposit should not exceed the capital of the bank?

Mr. MILLIKEN. Yes; if it lends on lands.

Mr. RUBEY. Do you mean to say the bank should not loan out more than its capital stock?

Mr. MILLIKEN. I direct your attention to the Credit Foncier of France, their great land-mortgage bank. Under its charter it is permitted to accept deposits aggregating 100,000,000 francs; but according to the last statement I have of it, its deposits amounted to but 69,022,317.36 francs. At the same time its paid capital and surplus amounted to 219,918,826.70 francs ($42,444,334). However, its total liabilities amounted to 4,559,071,663.83 francs, including capital and surplus, or $879,900,830. Its principal liabilities consisted of its debentures (bonds), aggregating 3,634,161,053.86 francs ($701,393,084). Thus, it will be observed that the French have given

mobility to their real estate investments, and thereby have given a wonderful stimulus to agriculture; at the same time they have no inflation. The holders of those debentures have gilt-edge securities and realize a larger income than do the savings-bank depositors of our New England States. Furthermore, the French industrial classes who hold those debentures have not a demand mortgage on the prosperity of France, as is the case in New England.

Mr. RUBEY. I have in mind a bank with a capital stock of $30,000 or $40,000 which has deposits of $300,000. They loan out possibly $250,000, and that money is out all over the country doing business.

Mr. TALCOTT. How much surplus?

Mr. RUBEY. $20,000. Is not that good business?

Mr. MILLIKEN. It is mighty poor banking, if that is loaned out on real estate.

Mr. RUBEY. No; not on realty, of course.

Mr. MILLIKEN. When you mix land-mortgage banking with commercial banking your security capital is too large. I will give an illustration of that——

Mr. RUBEY. The larger your deposits the more money you have to make loans with, and returns to pay on your capital.

Mr. MILLIKEN. Certainly, and the cheaper can such a bank afford to sell credit to borrowers. Now for the illustration showing the excessive capitalistic requirements when the two classes of banking are mixed or done by one institution. I call attention to the contrast between the great banks of London and Berlin. Those of London are commercial bankers strictly and are actuated by the sole desire to reap a profit from the sale of banking credit. In no sense of the word are they promoters. Whereas the Berlin bank are promoters as well as bankers. In consequence, the deposits of most of the London banks are from eight to ten times their paid capital and surplus, whereas few of the Berlin banks have deposits exceeding their capital and surplus four times. The liquidity or convertibility of the Berlin bank securities is less than those of the London banks. The object of a bank is to economize capital, and when you mix commercial banking, a business in which there is not much risk when sound monetary laws are observed, with a more hazardous business or class of banking, commerce must pay for the mistake. Now, when a deposit bank makes loans on real estate it must be for a long period, and inflation is bound to result. Why, many States have stay laws running for a year and more.

Mr. HAUGEN. But is it not a fact that you can turn a real estate mortgage into money quicker than you can commercial paper?

Mr. MILLIKEN. No, sir.

Mr. HAUGEN. That is the case in our State.

Mr. MILLIKEN. And it will cause inflation. That is giving excessive motion to your deposits, to your money.

Mr. HAUGEN. In time of stringency in our part of the country——

Mr. MILLIKEN (interposing). It will cause the breaking down of any credit system where it is practiced.

Mr. HAUGEN. Real estate mortgages always sell at a premium and are always in demand, and if you want to borrow or discount in a bank in Chicago or any place else carry real estate mortgages.

Mr. MILLIKEN. I must take issue with you there on any commercial bank in Chicago.

Mr. HAUGEN. I have been in the banking business for 20 years myself.

Mr. MILLIKEN. I call your attention to the statement of Mr. Herrick, who appeared before this committee. In that statement he said that Mr. James B. Forgan, president First National Bank of Chicago, told him that it required the services of one man in his bank to answer the demands of the people of the West for loans on farm lands. If you will turn to the hearings of your committee you will find it in Gov. Herrick's statement.

Mr. HAUGEN. One man?

Mr. MILLIKEN. That bank employs one man to do nothing else but answer demands for money to be loaned out on farms of the West.

Mr. TALCOTT. Loans which they declined or accepted?

Mr. MILLIKEN. Declined them, as that was unsafe banking.

Mr. HAUGEN. It is a national bank, but they can put it up as collateral security.

Mr. MILLIKEN. That would be a mere subterfuge and violation of the spirit of the national-bank act. Even if the law permitted it, it would be unsafe banking. Mr. Forgan is also president of the largest State bank west of the Alleghenies, and if that were good banking he would not decline it. I again refer you to Gov. Herrick's testimony. Let me again call attention to the French monetary system, the safest in the world. French statesmen recognized years ago the danger from giving excessive motion to money, employment of banking capital raised from deposits, when they organized and safeguarded the control of their Caisse, their central bank for savings banks. Every dollar deposited in a French savings bank (including the Government postal savings bank) must be sent to the Caisse for investment. French statesmanship did not stop after organizing and safeguarding the control of their Caisse, but it went further and passed a law prohibiting any person from depositing, during any one year, exceeding 1,000 francs ($200) in any one or any number of savings banks.

Mr. HAUGEN. Do they invest on real estate security?

Mr. MILLIKEN. To a limited extent, if at all. To be exact I refer to their statement of March 31, 1908, which shows total assets aggregating 4,879,801,747.14 francs ($941,801,737). Of which I find about 75 per cent comprised their Federal Government bonds, which they call "rentes." To be exact, the "rentes" then owned by the Caisse amounted to 3,586,307,002.44 francs. Their next largest item of assets was "comptes courants," deposits at the Bank of France and the Treasury, which amounted to 423,921,103.85 francs ($81,816,773). The next largest item is communal bonds (city bonds) aggregating 93,129,116.53 francs ($17,973,919). I find no real estate securities itemized in that statement, and I doubt if they hold any. They always keep a large stock of bills of exchange which they can go to the Bank of France with and secure money on.

Mr. RUBEY. I was just going to ask how the Caisse invest their money.

Mr. MILLIKEN. The Crédit Agricole is the name of the French agricultural cooperative credit society which lends on personal security to the farmers of France. The loans of the Crédit Agricole are for a much shorter time than those of the Crédit Foncier, the land mortgage bank, but for a longer period than do the commercial banks of

France. The Crédit Agricole began operations in 1900. The farmer is conservative and slow to take hold of new things, yet it has had a wonderful success and is on a far safer footing than the corresponding systems in Germany, the Raiffeisen system. The latter lends money for from six months to three years—seldom for five years. Of course two or three months' time is worth nothing to the farmer who may need credit for seeds, for fertilizers, or for work stock. His credit will not reproduce itself in so short a time. That is not desirable commercial bank credit. All commercial bankers will agree to this.

Now the German system has led to inflation, and as I have said, is not so sound as the French system. The Landschaften of Germany is not so sound as the Crédit Foncier of France; neither is the rural personal credit unions of Germany, as practiced by the Raiffeisen system, as sound as the French system, as operated by the Crédit Agricole. I find that Gov. Herrick only discussed the land mortgage bank of France, the Crédit Foncier. We must get out of the habit in this country of measuring prosperity by bank deposits. A reasonable amount of bank deposits is a healthy indicia of prosperity, and an excessive amount is evidence of weakness. To illustrate, I would call attention to the fact that the six New England States, with 7 per cent of our population, have $1,373,000,000 of savings-bank deposits, as compared with only $63,000,000 for the six Western States of Kansas, Nebraska, Minnesota, Wisconsin, Indiana, and Oklahoma, with 12½ per cent of our population. There is Mr. Haugen's State with more than $168,000,000 of savings-bank deposits.

Mr. HAUGEN. They have other banks there, the State and the National.

Mr. MILIKEN. But you have in your savings banks more than $168,000,000. I omitted your State in making this comparison; but I took States with one-eighth of our total population, and States which abounded in prosperity during the past five years. New England, with 33 per cent of the saving-bank deposits of the Union, is not so prosperous as those six Western States, with only 1½ per cent of the savings deposits of the whole Union. Neither is New England, from a monetary standpoint, as sound as those six Western States, because the wage earners of that section have a demand mortgage on that section, while those of the West are a part and parcel of the prosperity of that section. Under the French system we could furnish the industrial classes of New England safer investments than they now have, investments which would produce larger returns, and at the same time furnish the farmers cheaper and better credit than they now get, and thus enable them to produce larger crops, rendering the cost of living cheaper. But what is far better, we would have a far more stable condition of affairs throughout the country.

Mr. HAUGEN. And the savings banks in the New England States are doing possibly what you are proposing to do here. The savings banks there are cooperative.

Mr. MILLIKEN. Certainly; New England has the cooperative savings bank, but that is not as safe as the French rural credit societies. Not as safe as the French land mortgage or personal credit societies.

Mr. HAUGEN. That would not come under banking.

Mr. MILLIKEN. I might say that there is the same difference between the French rural credit societies and New England cooperative

industrial credit societies (savings banks), as there is between the person who lends his own money for a definite time in the future and a person lending out trust funds which may be called for at any time. The French industrial savings banks are sounder than those of New England, for the reasons I have heretofore stated. The French policy is to encourage the industrial classes to patronize savings banks until they accumulate a corporate unit, which is 1,000 francs ($200), and then the policy is to induce them to become investors. Their policy is to discourage the use of savings banks as investment institutions, as is the case in too many of the industrial communities of America. I maintain that our monetary condition is an unhealthy one for the whole country, and so long as it is allowed to exist just that long will we have panics. We must encourage our industrial classes to become a part and parcel of our prosperity. They are earning too little on their savings bank deposits, and the expense of maintaining our banking establishments is too great.

Mr. HAUGEN. What assurance have you that another bank can be carried at less expense, even if you give it the Landschaften name?

Mr. MILLIKEN. By doing away with the expensive deposit system, as I shall point out. I do not indorse the German Raiffeisen system, though in one section of Germany those banks are managed at the minimum expense, $5 per month. The services of the officers and directors are gratuitous. The German system has led to inflation. Their statesmen recognize the weakness of their system, and are improving it.

Mr. HAUGEN. The expense of maintaining any institution in Germany would be less than here.

Mr. MILLIKEN. The two principal secrets of the success of their Raiffeisen system are gratuitous expense of management and unlimited liability of the members of each community.

Mr. HAUGEN. If you could get anybody to run a bank here for nothing, of course it would cost less.

Mr. MILLIKEN. That is what Germany is doing. Their expense of management is reduced to the minimum.

By the way, Mr. Dawe spoke about the literature in existence treating of those European rural credit unions. The pamphlet to which he called your attention, entitled "Systems of Rural Cooperative Credit," has been made a public document, and is entitled "Senate Document No. 574, Sixty-second Congress, second session."

The CHAIRMAN. Let me ask this question: With these rural cooperative credit societies, you do not propose to have a bank law with the issues, and all that sort of thing, do you?

Mr. MILLIKEN. No.

The CHAIRMAN. I thought my friend confounded the two.

Mr. HAUGEN. I said the savings banks of the States are doing exactly what he proposes to do.

Mr. MILLIKEN. It is difficult for me to make myself clearly understood unless you knew the European system of commercial banking. If you understood that, you would readily grasp my point. For instance, if a wholesale merchant of Berlin should sell a bill of goods to a retailer in London, he would draw a 60 or 90 day bill of exchange on the London retailer. The London retailer would accept it and return it to the Berlin wholesaler. If the Berlin wholesaler should not be willing to trust the London retailer, then the latter would make

arrangement with his London bank to become his acceptor, and the retailer would become the indorser. In either event the Berlin wholesaler would have a bill which would be almost as liquid as a bank note, for he could take it to his Berlin bank and discount it at a very low rate of interest, frequently at the rate of 2 per cent per annum or less. If the bank discounting it should be in need of cash or bank notes, he would have nothing to do but take it to some other commercial bank, a bill broker, or the central bank. Such a bill might be sold and resold on the bill markets of Paris and London before maturity. That is the very safest kind of banking and sound as well. It is safe because the banks discounting it have two or more names on each bill. It is sound because each bill represents an actual commercial transaction which becomes payable in a short time.

What we must do is to apply that same principle to our rural credits, just as France and other European countries have done. Two things are necessary for the success of such a credit system; one is to furnish absolutely safe securities, and the other is finding a market for those securities. The German Raiffeisen system accomplished little until they federated. They did not federate by any act of any German legislative body, but voluntarily and for the purpose of having a head to their system to find a market for their local securities. Suppose that 10 farmers around Granbury, Tex., where I was raised—10 farmers I could select who are worth more than $100,000, some are members of a cooperative dairy—should know all about the European rural cooperative credit institutions and attempt to place it in operation by signing a joint and several note for $5,000, payable 10 months hence. That would not be desirable commercial bank paper. I seriously doubt if that paper could be discounted at less than 10 per cent. It could not be discounted in the East on any more favorable terms, because the lender would not know of the solvency or character of the makers. This is an extreme case, for I took a very large sum, under the assumption that each farmer would get his pro rata of the loan, and on that size amount a personal investigation might be made, and the paper discounted at from 5 to 6 per cent.

The CHAIRMAN. They have got to have an office and an agent there to do that business, have they not?

Mr. MILLIKEN. Not necessarily, unless they receive deposits. The officers could meet, say, Saturday afternoons to pass on the applications for loans. They would have no expense. Many of the Raiffeisen banks operate at an annual expense of $62.

The CHAIRMAN. You have to have a man there to look after that?

Mr. MILLIKEN. Not a bit, unless the bank receives deposits.

The CHAIRMAN. Somebody would have to keep a record.

Mr. MILLIKEN. The secretary would keep the records. The federated head would furnish them record books and other stationery. It would require but a few minutes to keep that every Saturday. Then the record books could be placed in the safe of some merchant or bank. That would be quite inexpensive.

The CHAIRMAN. Have you been to France and Europe?

Mr. MILLIKEN. I have never been to France, but I have been in England, Scotland, and Ireland.

The CHAIRMAN. I see you seem to understand the French system of finance.

Mr. MILLIKEN. I have read all the 45 volumes which the monetary commission got out, besides I have been studying this subject for about 18 years.

The CHAIRMAN. For my gratification, let me ask you this question: Is not the French banking system based very much on the old Bank of Venice?

Mr. MILLIKEN. I do not know anything about the old Bank of Venice.

The CHAIRMAN. You do not?

Mr. MILLIKEN. No, sir.

The CHAIRMAN. I should suppose that a man who had been in this thing would know something about the old Bank of Venice.

Mr. MILLIKEN. I have never studied the old Bank of Venice, for the reason that banking has made its greatest progress during the past 150 years.

The CHAIRMAN. You must know something about its history?

Mr. MILLIKEN. Yes; but inasmuch as Venice has not had a commercial status for about three centuries I did not go into the philosophy of their banking system.

Mr. MAGUIRE. I should like to ask you a little further about that question of joint and several liability. How far would that liability go on each individual and on that community of interest? How is it limited?

Mr. MILLIKEN. There is no limit to the liability for the members of each local association for the debts contracted by the same. But the members of one local association are not liable for the credits granted by another local association or the head of the whole.

Mr. MAGUIRE. Do you think that will work in a country like this, where there is an individualistic idea prevalent among the people?

Mr. MILLIKEN. It will require years to make it popular among the farmers. It should have a slow and steady growth. To inaugurate it the very best farmers of each community should be induced to become the organizers. Let the members of each local association have the right to reject any future applicant for membership, and to turn out any member who has proven to be unworthy of their association. Not only would it be the greatest benefit to agriculture, but it would render our monetary system safer and sounder.

Mr. MAGUIRE. That men would be taking on or assuming a good deal of liability, would they not?

Mr. MILLIKEN. They can be induced to assume it in time.

Mr. TALCOTT. Does not the individual give some security to the credit company?

Mr. MILLIKEN. Certainly the officers of the local associations would demand security when in doubt as to the solvency of the borrower. Another thing to be borne in mind, those credit unions do not sell consumptive credit. They limit their operations to the sale of productive credit exclusively. If you desire credit for the purpose of producing commerce, they will lend it to you if you are a farmer member. They will not lend money with which to buy an overcoat. Neither would they lend you money with which to buy a bull or stallion, but they will lend you to buy a cow or mare. It is productive credit they sell, and they would insure that cow and mare. It is both safe and sound.

Mr. TALCOTT. But the man that gets the money secures the company, does he not?

Mr. MILLIKEN. Yes; he secures the local association; the local association secures the federated head, and the federated head finds the money and sends it to the local association which turns it over to the individual borrower.

Mr. TALCOTT. So the central head is only becoming a guarantor for that amount which is not secured?

Mr. MILLIKEN. The central head is liable for the debts of all the local associations. It is this multiplicity of guarantors which affords such good security, and it takes good security to get cheap money.

Mr. MAGUIRE. There are about a million of people coming from Europe right along every year. I have wondered why it was that those people—educated, intelligent men, experienced men—have not attempted—those coming from Germany and other countries—why they have not attempted to incorporate those things in neighborhoods where a large foreign population is found.

Mr. MILLIKEN. The same thing may be said about the able and experienced bankers who come to this country. Talk to any one of them and he will tell you that we have the weakest banking system in the world. I presume you know that there is a strong sentiment in this country to resent any effort on the part of foreigners to teach us anything. What good would it do if they should attempt to do something?

Mr. MAGUIRE. I just wondered.

Mr. MILLIKEN. The individual efforts of persons in any community would amount to nothing without they had a market for such securities.

Mr. MAGUIRE. Why have they not taken the initiative?

Mr. MILLIKEN. The foreigner comes here to better his financial condition rather than to educate our people on cooperative rural-credit institutions. He would not be listened to on such a scientific question as this, and those who did listen to him for a while would regard him a bore and a crank. I speak from personal experience along this line, and if a foreigner should attempt it he would be insulted for his impertinence. If the farmers around Granbury, Tex., should jointly and severally sign their notes for such credit, they could find no purchasers for that paper. There is no market for such paper. If I were to take a bale of cotton to your city (Lincoln, Nebr.), I could only dispose of it as souvenirs, as there is no commercial market there for cotton. But let me take it to Granbury during the season, and the moment I reached the courthouse square there would be many buyers to meet me. You must have buyers as well as sellers before you can do business.

Mr. MAGUIRE. Why don't they go to their State legislature?

Mr. MILLIKEN. Those farmers know no more about this great question than do you gentlemen of this committee. Furthermore, it requires about as much effort to get such legislation passed in the State as it does in Congress. Who is going to put up the money for such a movement? We have no Raiffeisens in our State, either in knowledge of this important subject or inclination to spend his life in such a cause gratuitously. But what if some Raiffeisen should be

found who would go to the State legislature. Suppose the legislation was secured. That would only mean the getting together of the sellers. Then they would have to solve the question of getting the buyers. This is a dual Federal and State question.

Mr. HAUGEN. Do the people down there make a practice of signing each other's notes?

Mr. MILLIKEN. No.

Mr. HAUGEN. That is what this amounts to, is it not?

Mr. MILLIKEN. That is what it would be. It is cooperative.

Mr. RUBEY. These people who put themselves together in a community, they must go outside in order to get the money?

Mr. MILLIKEN. Certainly; they furnish the security and the head finds the money.

Mr. RUBEY. Will not the question of the supply and demand for money regulate the rate of interest they will have to pay?

Mr. MILLIKEN. Certainly.

Mr. RUBEY. In recent years one of the greatest credits we have in this country is commercial paper.

Mr. MILLIKEN. Yes; and the paper of those Raiffeisen banks of Germany and the Credit Agricole of France is far superior to that of our commercial banks in this country, because theirs is many-name paper, while the most of ours is single-name paper.

Mr. RUBEY. By which all these great institutions, corporations, etc., are able to finance their worth. You know that in 1907 commercial paper jumped from 3½ and 4 per cent on up to 5, 6, 7, and even up to 8 per cent.

Mr. MILLIKEN. Yes; and we were glad to get it at that rate.

Mr. MAGUIRE. Yes; and glad to get it at 8 per cent.

Mr. MILLIKEN. Certainly; the Bank of England rate jumped to 7 per cent. But its high rate simply caused gold to flow into London. During a short time they got gold from 23 different countries and not a dollar came to us. But we had to go after it.

Mr. MAGUIRE. Would not the same sort of conditions locally arise under this system?

Mr. MILLIKEN. Certainly; if we do not mend our monetary system we will have a breaking down of our credit system, as we experienced in 1907. But the system I propose will be a benefit to sound commercial banking, just as it is in France an aid to sound commercial banking there. Our national banking act prohibits the safest class of commercial banking, the acceptance of bills of exchange arising out of real commercial transactions and payable at short periods. When a European desires an investment which he can readily convert into money he buys bills of exchange. But their banks have international reputations and credit. A French bill circulates as readily in London or Berlin as it does in Paris. As I have said before, the authors of our national banking system were not monetary experts. They were told that the abuse by the banks in accepting bills of exchange produced the panic of 1857. They did not know what effect their action would have on commerce. Their sole thought was to furnish a market for Government bonds. There is no difference between a bank note and bill of exchange, except that the former is slightly more liquid than the latter, but only slightly so. Both are

commercial instruments strictly. Neither should ever be employed except to carry out a real commercial transaction. The "bullion committee report" states the proposition clearly in this language:

> There can be no possible excess in the issue of Bank of England paper * * * so long as the discount of mercantile bills is confined to paper of undoubted solidity, arising out of real commercial transactions, and payable at short and fixed periods.

That was a committee appointed by the House of Commons in 1810, and it is known as the "bullion committee," and the monetary law announced in that report, from which I have just read, is regarded by monetary experts everywhere as sound. Now, there is no difference between a bill of exchange and bank note, except the slight difference in liquidity. Therefore the same law applies to bills which applies to notes. And as bank "deposits are nothing but bank notes in disguise," it also follows that the banker in making loans from deposit funds should observe the law announced in the "bullion committee report." The banker must look to the convertibility as well as to the solidity of the security on which he makes loans.

The merchant who wants to add an addition to his building should not be granted banking credit. He needs more capital, and to raise it he should admit a new partner into the firm, or if it be incorporated, make an issue of stock or bonds. That is dead capital, and dead capital will not create banking capital. In most European countries such a transaction would come within the line of business carried on by a debenture, mortgage-loan, or promoting company. The result of our democratic idea of letting everybody engage in the banking business is that too many are to-day engaged in that business, not for the purpose of realizing a direct profit from the sale of credit, but for the indirect purpose of supplying funds for promoting enterprises they also own. They are used as "feeders" to those promoting enterprises. The Rothschilds have no voice in control of any of the banks in Europe, except possibly in Germany. They are promoters, and find capital to float all kinds of enterprises which appeal to their judgment. The Texas State banking commissioner, in his last report, called attention to the fact that in some sections of the State rival real-estate agents were organizing banks for advertising purposes. Just as long as that class of speculators are permitted to control banks of deposits, just that long will we have inflation, and every now and then we must wipe everything off the slate and begin again at the bottom of the ladder.

I maintain that we must have two classes of agricultural credit institutions in this country. One for real estate and the other for personal rural credit. For the farm-loan system take the best and safest features of the Landschaften system of Germany and the Credit Foncier of France. For the personal rural credits take the best features of the German Raiffeisen and French Credit Agricole systems. Adopt those systems in this country, where we have a dual form of government. I believe we should have a commission to investigate this question, as provided by the Lever and Gronna resolutions. Our consuls can't make such an investigation as is necessary for the guidance of Congress, as they are not monetary

experts. A lawyer must know something about his case before he begins to bring out the evidence before the jury. I believe you are a lawyer, Capt. Lamb——

The CHAIRMAN (interposing). I am just a plain farmer.

Mr. MILLIKEN. Well, an attorney can not properly present his case on its merits to the jury through his witnesses unless he has previously studied and assimilated the evidence himself. He can't potluck and succeed. Therefore, if you send over there men who are not monetary experts it will be a waste of money. It would be far better to have a commission composed of philosophers of credit. They certainly should know enough about monetary science to be able to tell when they were investigating an unsound system and to discuss the subject intelligently with foreign monetary experts.

The CHAIRMAN. I began to think so this morning, until this gentleman came in here and brought all these books, and then I thought we could study these books ourselves.

Mr. MILLIKEN. The books you refer to, the three bound magazines brought here by Mr. Dawe, contain each a short article on this subject. In the Congressional Library may be found a large volume, entitled "People's Banks," written by Henry W. Wolffe, of London, in 1892. There are also two excellent pamphlets which have been made public documents by the Senate at this session. They are numbered documents 572 and 574. Those two documents, comprising 74 pages, contain some important information, such as the progress of those credit unions, their methods of operation, manner of control, statistical data, etc., but I contend they do not contain sufficient information upon which you could afford to enact such important legislation. Furthermore, Members of Congress have quite enough to do without spending years of their time studying monetary science; and I mean studying, not merely reading such literature on the subject as now exists. There is no more reason to expect a Member of Congress to be a monetary expert than to expect him to be an astronomical expert. The questions asked and statements made here to-day by members of this committee, some of them bankers of long experience, demonstrate clearly to my mind the necessity for the appointment of a commission of experts to investigate this important subject. Congress should have a critical analysis of those systems over there before attempting to legislate. European parliaments, in appointing commissions to investigate and report on scientific subjects, invariably select experts, and that is the reason the reports of their commissions carry such weight and become so useful in formulating legislation.

It is well recognized that we have the weakest banking system in the world; yet if the foreign consuls in this country should write critical analyses of it for the use of their own people, and they should be published, as would be the case, don't anybody know they would have to leave this country? They would be charged with meddling with political conditions here. It has been suggested that all that is necessary is for us to procure copies of the laws creating those credit unions over there. No one would deny but that we should have such laws before attempting to legislate on the subject. But it must be borne well in mind that European countries do not legislate as do we.

They give to those in control of their corporations much more freedom and latitude than we do. They create legislative bodies for them. For their banks they create "bank parliaments." Thus it is that their corporations are taken out of politics. To illustrate the force of this statement I call your attention to the statement of the governor of the Bank of France. He said that, with the exception of the amendment of the bank's charter in 1897, there had not been one scintilla of legislation by the French Parliament respecting that institution since 1857. That statement may be found on page 189 of Senate Document No. 405, Sixty-first Congress, second session.

The CHAIRMAN. You can not compare this great country here with that.

Mr. MILLIKEN. Yes; this is a great country. I am proud of it. Anyone should be proud of a country whose people produce $35,000,000,000 of commerce annually, or about one-third of the whole world. But I am ashamed that we should persist in holding to a monetary system which makes us a race of speculators, a system which periodically and with almost the regularity of the seasons wipes us off the financial map. Let me direct further attention to the freedom of those controlling the great corporations of Europe. Take the Bank of England, for example. That is a bank of commerce strictly. It is the head of the British credit system. It is controlled by the great merchants of England. The voting units, or electors, of the Bank of England must own £500 of the bank's stock, and about twenty times that amount of interest in the mercantile business in England and be an Englishman. An English merchant owning £500 of that bank stock has just as much voice in the election of the governor and directors of the bank as if he owned £10,000,000. Therefore greed never actuates those in control of that great financial balance wheel. They are selfishly interested in having that bank serve commerce. They are not permitted to engage in speculative enterprises. Neither are they allowed to become interested in the banking business for profit. The merchant is the permanent regulator of the interest rate, the immediate regulator being the proportion existing between the demand and supply of money. The other banks of London are engaged in the sale of bank credit for profit.

There is no law in England providing in what the Bank of England shall invest its funds. Its "bank parliament," board of directors, could enact a by-law requiring every penny to be loaned out on corn or cotton stalks. So could I hold my finger over a candle and let it burn off, but instinct teaches me that I must pay the penalty. So likewise would those "great merchant" electors of the Bank of England suffer if they should commit such a financial folly. The Government of England does not spend a penny to inspect that great bank. Neither do the Governments of France and Belgium expend any money to inspect the heads of their credit systems, yet they are the three best-inspected financial institutions in the world. They are inspected by experts who remain in there all the while, and they are elected by financial backers not responsible for their control. Contrast that with the banks in this country, where we have Government inspection and legislative fetters galore. It is this placing of our Government in the banking business which is the principal cause of our financial ills. We are so imbued with the idea that the true criterion of prosperity lies in giving velocity to money that we have made

all these legislative provisions. This has taught the people to hoard instead of invest their money. Capital, like man and mind, is timid, and any legislative act which attempts to make it bold or reckless violates a natural law, and the penalty therefor is severe.

What we should do is to apply the principles underlying the control of those great European financial institutions to our rural credit institutions, and the best step in this direction is the adoption of the joint resolution before this committee for the appointment of a commission to make an investigation of foreign rural credit unions.

Mr. LEVER. Mr. Chairman and gentlemen, I thank you for the kind attention you have given to the witnesses on this case, and we will now close.

The CHAIRMAN. Does this committee wish to meet to consider this matter?

Mr. LEVER. Mr. Chairman, if you will permit me to say so, I called this matter to the attention of the committee rather for the purpose of having the members of the committee to think about it than to ask them to act upon it at this time. I trust the committee will take it under consideration and if we feel later that we ought to act on it, I trust we shall be able to get together. I should not like to have any action taken at this time.

APPENDIX.

THE SOUTHERN COMMERCIAL CONGRESS (INC.),
Washington, D. C., June 1, 1912.

Hon. JOHN LAMB, M. C.,
Washington, D. C.

MY DEAR SIR: At the hearing of the Committee on Agriculture last Wednesday, relative to the Gronna-Lever resolution regarding a commission to study European methods of rural finance, it was my pleasure to promise to the members of the committee then present a pamphlet containing an outline of European cooperative credit system. This I take pleasure, handing you herewith.

Yours, very truly,

G. GROSVENOR DAWE,
Managing Director.

[International Institute of Agriculture.]

AN OUTLINE OF THE EUROPEAN COOPERATIVE CREDIT SYSTEMS.

PREFACE.

In September, 1910, the International Institute of Agriculture began the publication of its Bulletin of Economic and Social Intelligence. This bulletin is published once a month, and the greater part is devoted to a survey of agricultural cooperation in the various countries of the world.

Some of the studies published in these bulletins have been collected in separate volumes, forming a series of monographs on agricultural cooperation.

As repeated requests have been made to the institute for the collection, in a small pamphlet, of the most essential information concerning the Raiffeisen and other systems of rural cooperative credit, the following outline of these systems has been compiled. It may be followed by others on the different branches of rural cooperation.

G. LORENZONI, *General Secretary.*

ROME, *February 26, 1912.*

INTRODUCTION.

Since the early part of the nineteenth century, European farmers have been struggling against adverse economic conditions. Chief amongst the difficulties against which they have had to contend has been the competition of new countries of immense territory and virgin soil, which, owing to the improvement in the means of transport, have been able to flood the markets of Europe with agricultural produce. Even in the most perishable products the competition has been severe, for the development of cold storage has enabled them to be brought to Europe from the most distant parts of the world.

To make headway against this competition, an economic transformation has been necessary, comparable to the transformation which has taken place in industry. The European farmers have, accordingly, reorganized not only their technical, but their business, methods.

The new business methods, which have spread all over Europe, and have been adopted even by the new countries (the United States and the British colonies), as well as by Asiatic countries, such as India and Japan, consist, in the main, in the application of cooperation and mutuality—combined efforts

and the acceptance of mutual obligations—to the various branches of the business of agriculture, of which the following are the most important:

(1) The provision of capital.
(2) The purchase of agricultural requirements.
(3) The preparation and sale of agricultural produce.
(4) Farm insurance.

It is with the application of cooperative and mutual methods to the provision of capital that we are here concerned, and we will endeavor to trace not only the principles of cooperative credit, but the methods in which those principles have been applied in various countries.

The main principle underlying all forms of cooperative credit is that if a group of persons combine to furnish a collective guaranty they can, on the security of that guaranty, obtain money at lower rates of interest than they could obtain it individually.

The collective guaranty may be that of real property. A number of landowners may obtain capital on the security of a collective mortgage of their lands. This is the basis of German Landschaften, one of the oldest forms of cooperative credit institution.

Or, again, the collective guaranty may be a personal one. A number of persons may obtain capital by making themselves jointly responsible for its repayment. Such liability may be unlimited or limited.

Unlimited liability is a fundamental part of the Raiffeisen system; but in the Schulze-Delitzsch system the liability of the members of the group is usually limited. Where the members are landowners, the collective personal guaranty becomes indirectly a property guaranty.

Upon such guaranties capital may be obtained in a variety of ways. In Germany the Landschaften issue bonds, but the Raiffeisen banks derive their working capital mainly from the deposits they are able to attract. In France the rural banks depend mainly upon capital advanced by the State. In all countries the credit societies are able to obtain capital from the larger banking institutions or from the investing public.

Having obtained the capital, the group of persons must be able to lend it to one another at a rate of interest only slightly in excess of the rate which they pay collectively. This requires two conditions: (1) That the expenses of management shall be small in proportion to the business done and (2) that the risk of loss shall be reduced to a minimum.

Where the business is very large, the expenses are not proportionately high, even if the undertaking be conducted on ordinary commercial lines, as we shall see in the case of the Schulze-Delitzsch banks. Where, however, the business is small, there must be no attempt to pay high dividends and the management must be largely voluntary. In the banks formed on the Raiffeisen system (which are individually small, though in the aggregate they do an enormous business) the payment of dividends is either prohibited altogether or it is limited to a small percentage, while the management is almost entirely gratuitous.

To reduce the risk of loans to members, many safeguards have been devised, which are adopted to varying extents in the different systems.

Where the members are landowners and can give mortgages of their property, it is only necessary to insure that the amount of the loan shall be fully secured by the mortgage, allowing for any possible depreciation in the value of the property. Loans on mortgages are however, an inconvenient form of credit, where capital is only required for a comparatively short period, and the following are the principal safeguards for loans given on personal security:

(1) That loans are only made to members of the group and that only persons known to be trustworthy are admitted.

(2) That membership is confined to persons residing within a small district and that therefore the members are personally known to one another.

(3) That the members being mutually responsible, it will be to the interest of all members to keep an eye upon a borrower and to see that he makes proper use of the money lent to him.

(4) That, in like manner, it is to the interest of all members to help a member when he is in difficulties.

(5) That the borrower is required to find sureties or give other collateral security for the repayment of the loan.

(6) That the borrower binds himself to apply his loan to a specific purpose which will bring in a monetary return sufficient to enable him to repay the sum borrowed, to pay the interest charged, and to leave a profit for himself.

It is not to be supposed that the whole of these safeguards are adopted in all cases. Loans, for example, are sometimes given on the borrower's mere note of hand without any collateral security. The fixing of the application of the loan, again, is most important where the borrowers are small cultivators unaccustomed to commercial methods, and is usually relaxed as their economic education becomes more advanced. We thus find it more generally insisted upon by the Raiffeisen banks in Austria and Italy, where they are of more recent introduction, than in Germany, where the members have now become familiarized with the commercial uses of credit.

We shall now see how these principles are applied in practice. In the survey which follows of agricultural cooperative credit in various countries we shall begin with Germany, since it was in that country that the three most important forms of cooperative credit—the Raiffeisen banks, the Schulze-Delitzsch banks, and the Landschaften—were originated. We shall then deal with Austria and Italy, in which countries the systems adopted are mere modifications of the German systems, and it will only be necessary for us to indicate in what respect they depart from the German model. Then will follow chapters on France, where cooperative credit is based largely upon an elaborate system of State aid, and Belgium, where we shall note the existence of a form of organization not found in other countries. The last two chapters will relate to Great Britain and Ireland, where cooperative credit is not as yet highly developed, and to British India, where it has been promoted directly by the Government.

CHAPTER I.

RURAL BANKS IN GERMANY—THE RAIFFEISEN SYSTEM.

In the first half of the past century the small farmers and small artisans of Germany, who could not have recourse directly to capitalists or to banks, suffered severely at the hands of the usurers from whom they procured the credit which was indispensable to the exercise of their business. The seriousness of the situation, rendered more acute by the economic transition which was taking place and was bringing with it a great and urgent need of credit, was clearly recognized by two men, who have deserved well not only of Germany, but of the whole civilized world, by devising and putting into practice the best methods of remedying the evil. These were Frederick William Raiffeisen, burgomaster of Weyerbusch, and Francis Frederick Schulze, better known by the name of Schulze-Delitzsch. The former was the originator of the rural cooperative banks, which have spread into all civilized countries; the latter of the urban popular banks.

These two forms of cooperative banks, although somewhat different in their organization, are based on the common fundamental principle of organizing the would-be borrowers themselves in order that they may obtain by combination the credit facilities which they would have sought individually in vain.

Such cooperation has made possible, on the one hand, the collection amongst the members themselves, in the form of shares or of small deposits, of a considerable amount of capital which serves to supply the credit requirements of their fellow members. On the other hand, the cooperative credit societies, being regularly managed and subject to rigorous supervision, have been able to procure credit on favorable terms from outside sources of capital.

The credit given by the Raiffeisen banks, which are rural in character, and by the Schulze-Delitzsch, which are mainly urban, is usually personal credit. Although they occasionally grant loans on mortgage for long periods, they generally confine themselves to the making of loans for comparatively short periods (in the Raiffeisen banks usually for one year, with a maximum of three or five years; in the Schulze-Delitzsch banks, three or six months) on personal security or on the security of personal property.

Loans on mortgage for long periods are, however, granted by another type of cooperative credit society, of which we shall have occasion to speak later, viz, the Landschaften and Ritterschaften. These are associations formed by landowners with the object of obtaining credit for land improvement by the issue of mortgage bonds.

We shall describe in this chapter the organization and working of the Raiffeisen banks.

SECTION 1.—*Organization of the rural banks.*

The fundamental principles of the Raiffeisen system are:

(1) Unlimited liability of the members.
(2) A restricted area of operations.
(3) Gratuitous management.

To these principles, which he wished to be always applied with the utmost rigor and without allowing any exceptions, Herr Raiffeisen added a body of moral and educational doctrines.

In addition to the rural banks which follow strictly the Raiffeisen principles and are combined in a national federation with headquarters at Neuwied (now removed to Berlin), there have also arisen other organizations which, although adopting the fundamental ideas of Raiffeisen, have not accepted the excessive strictness of his rules and have treated as superfluous the mystical doctrines which he had introduced into cooperation. The societies of this type, after having long hesitated between a separate organization and the Schulze-Delitzsch Federation, were finally collected under the guidance of William Haas into a separate national federation which had its headquarters first at Offenbach and then at Darmstadt.

The former of these federations became affiliated to the National Federation in 1904, and to indicate the rapid development of the rural banks we may here state that the number of societies embraced within the National Federation increased from 10,786 in 1904, with a membership of 954,000 and a total business (incomings and outgoings) of 2,490,000,000 marks,[1] to 12,614 in 1909, with a membership of 1,163,000 and a total business of 4,456,000,000 marks.

Certain differences (not, however, very serious) continue to exist between the pure Raiffeisen banks and the societies established on less strict lines. We shall have occasion to speak of these differences in outlining, as we now proceed to do, the leading features of the organization of the Raiffeisen banks. The statements are based upon the reports of the National Federation, and the figures relate (except where the context otherwise indicates) to the year 1909 and to the 12,614 rural banks embraced within the National Federation in that year.

Membership.—The members are farmers, usually peasant proprietors. The 12,614 rural banks existing in 1909 numbered in all 1,163,186 members; that is, an average of 92 members per bank. The number of members per bank varies considerably, however, in different regions, the highest average being in Westphalia, where it reaches 160 members per bank. The minimum number required by the legal constitution of the banks is 7, and some of the recently formed banks have exactly this number of members. The highest number of members contained in any one bank is 1,400, but this is a very exceptional case.

Liability.—The principle maintained by Raffeisen was that of the unlimited joint and several liability of the members. Whilst for other forms of rural cooperation the system of limited liability is increasingly adopted, the system of unlimited liability is still regarded in Germany as the system best adapted to rural cooperative credit. Of the banks existing in Germany 92 per cent are based upon unlimited liability and about 8 per cent upon limited liability. A fractional percentage of the banks were based upon an intermediate system, known as the system of unlimited liability to make supplementary payments.

Shares.—Raiffeisen commenced by excluding shares altogether in order to avoid any danger of capitalistic speculation, and, in fact, up to 1876 none of his banks had shares.

Being obliged in that year to comply with the imperial law which compelled cooperative societies to have foundation capital, he sought to evade the law as far as possible and fixed the shares at a maximum value of 10 marks. The Darmstadt Federation, on the other hand, recommended comparatively large shares, but in no case higher than 500 marks. In very few cases, however, does the value of the share exceed 100 marks.

In 1909 the average paid-up capital per member amounted to 19 marks. But in this regard also there are great differences as between different regions. The necessity of forming a foundation capital is, in fact, not so great in the case of the exclusively agricultural banks, the operation of which are guaranteed by the lands of the members, as in the case of banks which can only offer a personal guaranty.

Thus in Rhenish Prussia and Hesse, which are mainly industrial, the average paid-up share capital is respectively 103 and 86 marks, while, on the other hand,

[1] A mark is equivalent to $0.238, or £0.0489.

the average is lowest in other regions, such as Westphalia and Oldenburg, where it hardly reaches 4 or 6 marks.

In the societies where the liability is unlimited a member can not take more than one share; in societies with limited liability, however, he may take many. The value of the shares and, in the latter case, also their number, are fixed by the rules. The shares are repayable to the members upon withdrawal from the society, and interest is paid upon them at a rate which must not in any case exceed the interest which borrowers pay upon loans from the society.

Entrance fees.—The pure Raiffeisen system does not admit of any entrance fees, as being contrary to the lofty conceptions of mutual responsibility which inspired Raiffeisen's propaganda. Raiffeisen wished that his banks should be open to anyone who required to have recourse to them. The Darmstadt Federation, however, allows small entrance fees, which are immediately carried to the reserve fund.

Area of operations.—Another fundamental principle of the Raiffeisen system is that the area of operations should be limited to a commune or a parish. The system if the rural banks is, in fact, founded on mutual confidence and collective liability; the members must not only know each other personally, but must also be able to see from day to day the manner in which their money is employed.

Management.—The organization of the rural banks being, so to speak, familiar and friendly, their management is very simple. The administrative functions are divided between the committee of management, the council of supervision, and the general meeting. The executive work is carried out by the treasurer, who is often the only employee of the bank, and in any case is responsible for the work of the other employees.

The general meeting appoints the committee of management, the council of supervision, and the treasurer. The conduct of the business is intrusted to the committee of management, upon which often sit the best educated persons of the district, such as the schoolmasters or priests; for these, however, actual farmers are being more and more substituted.

The committee of management usually give their services gratuitously. This, too, is one of the principles of the pure Raiffeisenism, which, however, permits in any case the remuneration of the treasurer. The Darmstadt Federation also allows the committeemen to be paid for their services when the business of the bank is fairly large.

In 1909 the expenses of management amounted, on the average, to the modest sum of 638 marks per bank. Here, too, one finds marked differences between the various federations. In Ermland, in East Prussia, and in West Prussia the average expenses of management are rather high, ranging from 1,200 to 1,400 marks. The lowest average is found in the Upper Palitinate, where it is 244 marks. If, again, we consider the general expenses in proportion to the total business done (i. e., the sum of the incomings and outgoings), we find an average percentage of 0.18, with a maximum of 0.53 per cent in the Nassau Federation (Frankfort on the Main) and a minimum of 0.04 per cent in Schleswig-Holstein.

SECTION 2.—*The business of the rural banks.*

Let us now examine, first, the sources from which the rural banks draw their working capital, and then the methods of advancing the capital so obtained to their own members. We shall thus follow the complete cycle according to which the business of the rural banks is conducted.

Working capital.—The capital which the banks have at their disposal for making loans to their members is composed of the shares paid up by the members, the reserve fund accumulated in previous years, the savings deposits and deposits on current account, and, lastly, the sums which the bank procures by means of loans from central cooperative banks, other banks, or private individuals.

In the balance sheet the working capital is approximately the same as the total liabilities. It is true that in the total liabilities are also included items such as bills issued, which appear in equal amounts on both sides of the balance sheet, and figures relating to certain operations (e. g., property deposited, payments, etc.) which are not part of the capital at the disposal of the bank. However, not being able to eliminate such items, and taking into consideration that they are comparatively unimportant in the case of the rural banks, we can consider the working capital as being roughly equivalent to the total liabilities.

The total liabilities amounted in 1909 for the whole of the German Empire to 1,900,000,000 marks, being an average of 153,000 marks per bank and 1,664 marks per member. These averages varied between rather wide extremes.

The average per bank reached almost half a million marks in the Ermland Federation, while it was as low as 67,000 marks in the Grand Duchy of Baden. The average per member was highest in Rhenish Prussia (the Bonn Federation), where it reached 3,000 marks, and lowest in the Grand Duchy of Baden, where it was 700 marks.

Let us now analyze the total working capital according to the items which compose it:

	Marks.	Percentage of the total.
Share capital	22,358,433	1.2
Reserve	50,981,069	2.6
Deposits on current account	189,077,842	9.8
Savings deposits	1,455,618,456	95.2
Other liabilities	217,487,462	11.2
Total working capital	[1] 1,935,523,262	100.0

[1] $461,089,632, or £94,744,821.

Under the head of "Other liabilities" are included, besides other items, the sums which the banks have procured by loans from banks and individual capitalists.

The share capital together with the reserve funds form the banks' own capital; the remainder is capital from outside sources. Following this simpler classification we find that the former amounts to 73,339,502 marks, or 3.8 per cent of the total, and the latter to 1,862,183,760 marks, or 96.2 per cent.

These figures suggest some interesting considerations. We see, first of all, that the rural banks succeed in carrying on an enormous business on the foundation of an extremely slender capital. The current accounts and savings deposits furnish, however, the greater part of the working capital, viz., 85 per cent of the total. As against this the loans from third parties only form a relatively small figure, which demonstrates the capacity of the rural banks to provide, for the most part, by the ordinary means, for their operations without having recourse to too great an extent to loans from outsiders. Out of nearly 2,000,000,000 marks placed at the disposal of the farmers, only 11.2 per cent was furnished by outsiders, while 88.8 per cent was provided by the savings and deposits of the farmers themselves or of the local public.

To the capital of the society we have referred when speaking of the shares; of the reserve fund we shall speak when dealing with the distribution of the profit. We need only remark here that the capital obtained from outside sources is 25 times as large as the societies' own capital (share capital and reserve). This proportion is generally considered too high. There is a tendency, therefore, at present to increase the value of the shares, raising it to 50 or 100 marks, in order to provide the rural banks with a wider margin to cover possible fluctuations in the deposits.

In regard to the deposits it should be noted that savings deposits may be made either by members or by nonmembers, but that deposits on current account can only be made by members. In 1909 the savings deposits averaged 115,000 marks per bank. In the various federations this average reached a maximum of 447,000 marks in the Ermland Federation and was lowest in Federation of Alsace-Lorraine, where it was 43,000 marks. The averages of the deposits on current account were lower, being 22,905 marks per bank and 247 marks per member. The highest averages were found in the Grand Duchy of Hesse, viz, 84,466 marks per bank and 684 marks per member, and the lowest in the Federation of Posen (No. II) and in the Raiffeisen Federation of Alsace-Lorraine, being respectively 4,398 marks and 4,643 marks per bank and 49 marks and 27 marks per member.

We have said that 11 per cent of the working capital is drawn from outside sources. These include the central cooperative banks, the banking institutions, and the private individuals with whom the rural banks contract debts by means of banking operations. Since the development of the central banks, however, the business of this kind with other banks or with private individuals has greatly diminished. It will be more convenient to speak of the business done with the central banks when we are dealing with these latter, but we

may here remark that since the working capital of the central banks is formed to a large extent by the funds received from the local rural banks the proportion of the money provided by the farmers themselves to be employed in loans for the benefit of agriculture is really even larger than would appear from the figures previously given.

The granting of loans, etc.—The business of the banks consists, for the most part, in making advances to members. Surplus money is deposited with the central banks or invested in banking operations with third parties. With regard to the loans to members, we will speak first of their character and then of the security upon which they are made.

The rural banks make loans of two kinds, viz. loans on current account and loans for fixed periods. At the end of 1909 the loans to the members outstanding were thus classified:

	Marks.	Percentage of total.
Loans on current account	425,995,403	28.3
Loans for fixed periods	1,082,446,388	71.7
Total loans outstanding	1,508,441,791	100.0

The loans on current account were, therefore, about a third of the total loans. In all the banks there is a tendency to extend the practice of giving loans on current account. This is generally the most convenient form of loan for the members, for whom the small rural bank serves as banker, just as the great banking institutions do for the merchants and manufacturers of the city. But this form of loan requires a higher economic education in the members and more advanced social conditions.

The members guarantee the fulfillment of their obligations to the bank by finding sureties, by the deposit of valuable (share certificates, etc.), by giving a mortgage, or by their mere promise. The finding of sureties is the form of security usually preferred.

The period of the loans varies from six months to two or three years and even more in exceptional cases.

Various other arrangements have been thought out to diminish the risk of the loans granted by the rural banks. Thus, for example, the law relating to cooperative societies lays it down that the general meeting shall fix the maximum limit beyond which loans must not be made to the members, whatever may be their financial position or whatever the security offered.

The principal safeguard, however, for the success of the rural banks lies in their very constitution. The limited area of operations and the nature of rural life make it possible for each member to keep an eye upon the affairs of his fellow members, in which, moreover, he is directly interested, so that he can easily judge at any moment of their solvency and of the manner in which they are utilizing the money obtained from the bank.

Profits.—The object of the rural banks is to give credit to their members on favorable terms and not to make a commercial profit.

The Raiffeisen system, accordingly, does not admit of any distribution of dividend, all the profits realized being carried to the reserve fund or to the creation of institutions of public utility. The Darmstadt Federation, on the other hand, allows a distribution of dividend on the shares, which, however, must not exceed the maximum rate of interest charged to borrowers.

In 1909 the net profit realized by the rural banks was more than 7,000,000 marks. This is sufficient evidence of the flourishing condition of these institutions. Of this enormous profit only a small fraction was distributed as dividend. In no case, in fact, did the dividends distributed exceed 4 per cent of the paid-up shares, and in many cases no dividends at all were distributed. In this manner the banks are continually strengthening their financial position. This is demonstrated by the steady increase of the reserve funds. In a single year, from 1908 to 1909, the aggregate reserve fund was increased by 7,000,000 marks, while the profits realized at the end of 1908 were about 8,000,000 francs. Thus seven-eighths (that is, 87 per cent) of the profits made in that year were carried to the reserve.

SECTION 3.—*Statistics of the rural banks.*

The following statistics will show, better than it can otherwise be indicated, the great development in Germany of the rural banks, which were so modestly initiated in 1862.

We give first a table relating to the number of banks legally established in Germany, as shown by their registration in the Gazette of the Empire.

TABLE I.—*Number of rural banks in Germany on June 1 in each year from 1890 to 1910.*

1890	1,729	1901	10,487
1891	2,134	1902	11,121
1892	2,647	1903	11,750
1893	3,040	1904	12,477
1894	3,850	1905	13,181
1895	4,872	1906	13,635
1896	6,391	1907	14,096
1897	7,612	1908	14,709
1898	8,595	1909	15,158
1899	9,208	1910	15,517
1900	9,793		

We now give some figures showing the business done by the 12,614 rural banks embraced in the National Federation in 1909. It should be noted that while the figures in the preceding table are derived from information which the societies are bound by law to publish, the following figures are privately collected by the federations (of which we shall give an account presently) and, more particularly, by the National Federation.

TABLE II.—*Business done by the rural banks in 1909.*

	Aggregate figures.	Average per bank.
Number of banks of which particulars are given	12,614	.....
Membership	1,163,186	92
	Marks.	*Marks.*
Total business done (incomings and outgoings)	[1] 4,456,161,532	353,271
Total liabilities	1,935,523,262	153,442
Paid-up share capital	22,358,433	1,773
Reserve funds	50,981,069	4,042
Deposits in hand at end of year	1,644,696,298	130,387
Loans outstanding at end of year	1,508,441,791	119,584
Loans granted during the year	[2] 901,227,744	71,446

[1] $1,061,568,167, or £218,131,310. [2] $214,694,794, or £44,115,544.

SECTION 4.—*The federations and central institutions of the rural banks.*[1]

The rural banks felt from the beginning the need of combination amongst themselves for common purposes. The need was twofold. On the one hand a common organization was required to direct the movement and to give it uniformity; on the other hand, there was need of central institutions which might equalize the need of credit of the individual banks, supplying them with money when required and employing their surplus funds.

For the first of these objects the federations were formed; for the second, the central institutions.

(*a*) *The federations.*—The federations of cooperative societies are unions formed for propaganda, education, and mutual defense. They embrace not only rural credit societies, but rural cooperative societies of every kind.

We have already mentioned the existence of two great federations, which embrace the whole empire within their sphere of operations—the Federation of Agricultural Cooperative Societies, with headquarters at Neuwied, founded by Raiffeisen in 1877, and the National Federation of German Agricultural Cooperative Societies, which was founded in 1883 and has its headquarters at Darmstadt. For a long time these led a separate existence, each propagating its own

[1] We adopt here a distinction which is not in general use in English. The wor "federation" will be employed to indicate a central organization of cooperative societies for such purposes as propaganda, education, supervision, and mutual defense. By "central institution" we shall mean a central organization of cooperative societies for business purposes.

ideas; sometimes, too, there was hostility between them. Finally, in 1905, the Neuwied Federation became affiliated to the National Federation of Darmstadt. There is now, therefore, a single organization, the National Federation of Darmstadt, which embraces a very large majority of the German agricultural cooperative societies. It contained on June 1, 1910, no less than 18,962 cooperative societies, including 78 central cooperative societies, 12,894 cooperative credit societies, 2,077 cooperative distributive societies, 2,028 cooperative dairies, and 1,885 cooperative societies of other kinds.

The national federation is in reality composed of provincial federations. In fact, only five cooperative societies, of which four are central institutions, are directly affiliated to the national federation, while all the rest are indirectly attached to the national federation by being affiliated to the respective provincial federations. These are federations which embrace the cooperative societies in a defined portion of the territory of the Empire, and which, although affiliated to the national federation, enjoy a large degree of autonomy.

Besides the work of instruction, organization, and propaganda, they fulfill the very important function of inspection, assigned to them by the law of 1889. For this purpose they employ inspectors, who, by frequent visits, supervise the management and the conduct of the business of the affiliated societies.

To indicate the importance of the provincial federations, it is sufficient to say that of the 23,845 rural cooperative societies existing in Germany in 1910, no less than 21,830 (i. e., 92 per cent) were organized in federations. The number of provincial federations affiliated to the national federation is 41. Besides these, there are some independent federations which embrace a limited number of cooperative societies, and of which the most important is the Federation of Wurtemberg, contained in 1,383 cooperative societies in 1908.

(*b*) *The central banks.*—As we have already indicated, the second method of centralizing rural banks and cooperative societies in general is the formation of central banks. Between these and the federations there is no confusion of functions, but they mutually support one another. The central banks undertake the provision of capital for the rural banks and the utilization of their surplus funds, when they have any, always keeping in touch with the corresponding federation, to which they are usually linked by the fact that the same persons manage the business of both institutions. Further, the central banks, as a rule, only admit cooperative societies which already belong to the federation of their province.

The provincial central banks are cooperative societies with limited liability. The Bank of Darmstadt alone is a company with a liability limited by shares, having been founded before the law of 1889 allowed the formation of central cooperative societies composed of other cooperative societies.

In 1910 there were affiliated to the national federation 36 provincial central banks, of which 35 were distributed throughout the various regions of Germany and 1 was in the German colony of southwest Africa.

Speaking broadly, it may be said that the central banks fulfill the same functions for the rural banks which the rural banks fulfill for their members.

As in the case of the rural banks, the working capital is furnished by the share capital, by the deposits of the cooperative societies, and by the sums which they procure by loans from the general central banks, or the Prussian Central Bank (of which we shall speak presently) and from other banks or private bankers. In like manner as we have seen in the case of the separate rural banks, the most important part of the working capital is formed by the deposits of the members. This is clearly shown by the following table, which indicates the working capital of the provincial central banks at the end of 1909.

	Marks.	Percentage of total.
Paid-up capital	21,493,532	8.2
Reserve funds	4,321,500	1.6
Deposits of the members	187,345,775	71.3
Loans from the general central banks and the Prussian Central Bank	19,047,687	7.2
Loans from other banks or from private individuals and liabilities in respect of bills	28,616,979	10.9
Other items	1,990,123	.8
Total	[1] 262,815,596	100.0

[1] $62,609,191, or £12,864,953.

From these figures we see that of the working capital of the provincial banks 9.8 per cent is formed by the funds of the banks themselves (share capital and reserve), 71.3 per cent by deposits, and 18.9 per cent by loans contracted with third parties. If we compare these figures with the corresponding figures for the rural banks, we shall see that the funds of the banks themselves, though representing in both cases only a small proportion of the total available capital, is appreciably higher in the central banks than in the rural banks, while the proportion of the deposits is less and of the loans from third parties greater. Accordingly, the central banks, by regulating the rate of interest, endeavor to increase the amount of the members' deposits and thus to lessen the necessity of having recourse to outside sources of capital.

The central banks utilize their working capital in making loans to the cooperative societies, either in the form of advances on current account or of loans for fixed periods. The first kind is by far the most usual, unlike what we have seen in the case of the rural banks. This is explained by the fact that the central banks are dealing with economic organisms which are more developed and therefore better adapted to this more advanced form of credit. At the end of 1909 the provincial central banks had about 182,000,000 marks outstanding on loan, of which 173,000,000 marks (that is 95 per cent) were loans on current account and 9,000,000 marks (5 per cent) loans for fixed periods. The remainder of the capital was invested in securities or in discounting bills of exchange, or deposited with the general central banks or with other banks or private bankers.

Besides the provincial banks of which we have spoken, there are also two general central cooperative banks, which, unlike the provincial banks, have a sphere of operations which is not limited to that of a provincial federation, but extends over the whole Empire. These are the Central Agricultural Loan Bank of Germany, with headquarters at Berlin, which was founded by Raiffeisen in 1876 and until recently had its headquarters at Neuwied; and the National Bank for Cooperative Societies, with headquarters at Darmstadt, established in 1902 by the National Federation. Both of these banks are companies with liability limited by shares.

The Darmstadt Bank deals almost exclusively with the 36 provincial central banks. To the Berlin Bank, on the other hand, are affiliated 4,399 rural banks of the pure Raiffeisen type, scattered over the whole of Germany. The loans granted to members amounted, in the case of the Berlin Bank, to 74,600,000 marks (of which 2,000,000 were loans for fixed periods) and in the case of the Darmstadt Bank to about 11,000,000 marks, all being loans on current account.

The following table gives aggregate statistics of the provincial banks and separate statistics of the two general banks for the financial year 1909:

TABLE III.—*Business done by the provincial banks and the two general banks in 1909.*

	Aggregate figures for the provincial banks.	National Bank for Cooperative Societies (Darmstadt).	Central Agricultural Loan Bank of Germany (Berlin).	Aggregate figures for provincial and general banks.
Number of banks of which particulars are given.	36	1	1	38
Membership	10,987	50	4,399	15,436
	Marks.	*Marks.*	*Marks.*	*Marks.*
Sum guaranteed by the liability of the members	266,830,500	5,000,000	8,581,000	280,411,500
Total business done (incomings and outgoings)	4,913,786,468	836,082,752	787,206,739	[1] 6,537,075,959
Total liabilities	262,815,596	17,658,896	91,523,183	371,997,675
Paid-up share capital	21,493,532	5,000,000	8,581,000	35,074,532
Reserve funds	4,321,500	8,602	712,416	5,042,518
Deposits from local cooperative societies in hand at end of year	187,345,775	9,922,413	80,379,645	277,647,833
Loans to local cooperative societies outstanding at end of year	182,503,114	10,703,101	74,673,826	267,880,041
Loans granted during the year	732,715,881	191,479,143	([2])	[3] 924,195,024

[1] $1,557,293,580, or £319,993,100.

[2] The amount of the loans granted by the Central Agricultural Loan Bank of Germany is not stated in the statistics published by the National Federation.

[3] Exclusive of the amount of loans granted by the Central Agricultural Loans Bank for Germany: $220,196,170, or £45,239,803.

CHAPTER II.

POPULAR BANKS IN GERMANY—THE SCHULZE-DELITZSCH SYSTEM.

The rural banks and their central banks are not the only cooperative societies in Germany which provide agriculture with personal credit; we must also take account of the popular banks on the Schulze-Delitzsch system.[1]

These banks, which were formed before the rural banks and served as models for the first banks founded by Raiffeisen, assisted largely at the beginning of the cooperative movement to combat usury even in the country. Even now, notwithstanding the great development of the rural banks, they are largely utilized by farmers, many of whom belong, as we shall now see, to the banks themselves.

While Raiffeisen adapted cooperation to the needs and to the mental attitude of the farmers Schulze-Delitzsch devised organizations specially suited to the needs and economic character of town dwellers. The Schulze-Delitzsch banks have, therefore, unlike the rural banks, a large range of business in an extended area of operations; they accumulate a considerable quantity of capital and they distribute fairly high dividends. They do not follow the principle of unpaid management; on the contrary, their management is rather costly and is conducted on strict business lines. They are very often based on limited liability and they carry on a series of banking operations which the rural banks only undertake exceptionally, if at all. In fact their business approaches more closely than that of the rural banks to banking business properly so called.

The greater number of the Schulze-Delitzsch banks are affiliated to a general federation, of which we shall speak in due course. The number of banks affiliated to this federation increased from 904 in 1901 to 939 in 1910, while the membership increased during the same period from 527,000 to 600,000; the loans granted in 1901 amounted to 2,525,500,000 marks, while the loans granted in 1910 amounted to 4,015,900,000 marks.

There exist, also, a certain number of independent banks, unattached to the federation. Of 1,035 banks which furnished particulars of their working in 1901 to the federation 939 were affiliated to the federation and 96 were independent of it. The particulars which follow refer exclusively (except where otherwise indicated) to the 939 banks affiliated to the federation.

SECTION 1.—*Organization of the popular banks.*

There are marked differences between the popular banks and the rural banks, both in regard to the character of the members and to the size of their shares.

Membership.—The average membership of the popular banks in 1910 was 639, a figure considerable higher than the average for rural banks.

Whilst the rural banks draw their members exclusively from farmers, the Schulze-Delitzsch banks include members of various occupations. This is, indeed, a fundamental principle of the system, which regards an equitable representation of the various occupations and social classes as a factor making for the stability and prosperity of the popular banks.

In the following figures are shown by percentages the different classes which composed the membership of the popular banks at the end of 1910:

	Per cent.
1. Independent agriculturists (farmers, etc.)	26.57
2. Wage-earning agriculturists (laborers, etc.)	2.41
3. Artisans	23.03
4. Merchants, manufacturers, etc	19.72
5. Workmen, apprentices, and wage earners generally	10.55
6. Professional men, civil servants, clerks, etc	8.93
7. Persons living on pensions or possessing independent means	8.79
	100.00

[1] We employ the expression "popular banks," although this is not the title usually adopted in Germany, where they are known as "savings and loan banks." English writers usually describe them as "urban banks," but we avoid this title as we are considering the banks in relation to agriculture. The title "popular banks," given in Italy to the Luzzatti banks, seems equally appropriate for the Schulze-Delitzsch banks upon with the Luzzatti banks were modeled.

The class most largely represented are the independent agriculturists, who are usually farmers cultivating small or medium-sized holdings. Next come the artisans. These two classes together furnish about half the total membership. Considering the members from the point of view of social status, we may say that the popular banks contain principally persons belonging to the lower middle classes without, however, excluding either the working classes or the persons who, like civil servants, manufacturers, etc., occupy a higher economic and social position.

Liability.—In 1910, out of a total of 939 banks 567 (that is, 60.3 per cent) were based on unlimited liability and 372 on limited liability.

Although the system of unlimited liability is steadily increasing, unlimited liability is still considered the best system on which to establish popular banks in districts which are not yet familiar with cooperative credit.

Shares.—The shares of the members are, as we have already remarked, rather high. The general congress of the popular banks of 1896 recommended that the shares should be at least 300 marks. A subsequent congress recommended for banks with limited liability a minimum of 500 marks, limiting the liability of the members to three times the amount of the shares. At present the average share capital per member is 360 marks, but there is a constant tendency to increase it. In 1882 the average was 223 marks, increasing successively to 226 marks in 1892 and to 276 marks in 1902, finally reaching the present figure. It may be anticipated that this tendency will continue in the future, in view of the desire to insure for the popular banks a greater stability and independence.

SECTION 2.—*The business of the popular banks.*

Working capital.—The aggregate working capital of the popular banks was nearly 1,500,000,000 marks at the end of 1910, giving the truly remarkable average of 1,500,088 marks per bank. This average, which shows the financial importance of the popular banks is the result of a continuous upward movement. In 1886 it was only 617,000 marks; in 1898 it rose to 800,000 marks; and in 1902 it reached the million. In the last 20 years the aggregate funds at the disposal of the popular banks has, therefore, been trebled.

Examining the sources from which these funds are derived, we find following figures in 1910:

	Marks.	Percentage.
Share capital	216,380,103	14.5
Reserve funds	94,187,564	6.5
Capital from outside sources	1,145,014,688	78.7
Total working capital	[1] 1,455,532,355	100.0

[1] $346,743,897, or £71,249,028.

The proportion of the bank's own funds (21.3 per cent) is, therefore, appreciably higher than in the case of the rural banks. The sources of information at our disposal do not distinguish between the funds derived from deposits from those obtained from third parties. The sum stated as "capital obtained from outside sources" includes, therefore, the savings or deposits on current account as well as the sums which the banks obtain from other institutions or from private individuals by contracting loans at sight or for fixed periods against acceptances or mortgages of their property.

Banking operations.—Speaking broadly, the Schulze-Delitzsch banks carry on every kind of banking business.

Their primary object is, however, that of granting loans for short periods to their members. For this purpose they used 4,000,000,000 marks in 1910, of which at the end of the year 1,200,000,000 marks were still outstanding.

In regard to the period of the loans, we find that of the sums advanced during the year 41.50 per cent were on current account. The remainder was lent for fixed periods by means of discounting bills of exchange or giving loans on pledge or on mortgage. This last form of loan is, however, from the very nature of the popular banks, comparatively rare; at the end of 1910 the loans on mortgage amounted to scarcely 10 per cent of the total loans granted.

Where special guaranties, such as pledges or mortgages, are not given the loans are guaranteed by sureties or by acceptances, sureties being usually preferred. A small number of loans are granted without guaranty of any kind.

Surplus funds are deposited with other institutions or invested in securities or first-class bills (bankers' acceptances), which represent the safest means of realization in case of any unforeseen eventuality. At the end of 1910 the popular banks possessed 61,000,000 marks deposited with other institutions, 98,000,000 marks in securities, and 22,000,000 marks in first-class bills, making a total of 181,000,000 marks of easily realizable assets. They also possessed 51,000,000 marks in real property, including office buildings and property acquired as the result of loans not repaid.

Profits and losses.—The gross profits realized in the year 1910 amounted to more than 76,000,000 marks. Of this sum, 43,000,000 marks was required to pay the interest on the capital obtained from outside sources. The gross profit represented 5.23 per cent of the working capital; the sums paid, however, by way of interest on the capital represented only 3.76 per cent of the working capital. The popular banks have, therefore, been able to procure the funds which they employ at a rate which is not too high and to realize a moderate margin of interest. From this margin must still be deducted the management expenses, which exceeded 12,000,000 marks. This was equivalent to 16.51 per cent of the total gross profits and to 0.09 per cent of the total business done (incomings and outgoings).

The net profit available for distribution after deduction of interest on borrowed capital, depreciation, and the various losses exceeded 18,000,000 marks, representing 8.60 per cent on the share capital.

The greater part of the net profit was distributed as dividend: the remainder was carried to the reserve funds or, to a small extent, devoted to objects of public utility. The rate of dividend distributed varies considerably from bank to bank, ranging generally from 5 to 7 per cent of the paid-up share capital. There were, however, 19 banks which distributed a dividend of more than 10 per cent and one in which a 25 per cent dividend was paid.

SECTION 3.—*Statistics of the popular banks.*

The popular banks for which statistics for the year 1910 are available are shown in the following table:

	Banks.	Members.	Members who have taken part in the credit business.
Affiliated to the National Federation	939	600,387	358,649
Not affiliated to the National Federation	96	44,955	23,394
Total	1,035	645,342	382,043

It is worth noting how these banks really apply cooperative principles in relation to their members. More than half of the members took advantage during the course of the year of the credit facilities which they offered.

The following table contains particulars of the business done by the popular banks in the year 1910:

TABLE IV.—*Business done by the popular banks in 1910.*

	Banks affiliated to the National Federation.	Banks not affiliated to the National Federation.	Total.
	Marks.	*Marks.*	*Marks.*
Total business done (incomings and outgoings)	12,912,128,660	654,053,803	[1] 13,566,182,463
Total liabilities	1,477,195,299	100,338,847	1,577,529,146
Paid-up share capital	216,330,103	19,413,932	235,744,035
Reserve funds	94,187,564	5,523,311	99,710,875
Loans outstanding at end of year	1,201,862,882	83,907,985	1,285,770,867
Loans granted during the year	4,015,920,815	175,841,173	[2] 4,191,761,988

[1] $3,231,801,035, or £664,071,338. [2] $998,581,640, or £205,188,822.

PARAGRAPH 4.—*Federations and central institutions of the popular banks.*

(*a*) *Federations.*—The great majority of the Schulze-Delitzsch banks are affiliated to provincial federations (32 in number), which in turn are affiliated to the General Federation of German Cooperative Societies.

The provincial federations include besides the urban cooperative credit societies cooperative distributive societies, cooperative productive societies, and cooperative building societies. In 1911 the federations embraced 1,514 cooperative societies, of which 973 were credit societies. 290 distributive societies, 63 productive societies, and 188 building societies.

(*b*) *Central institutions.*—For the popular banks the need of central banks has not been felt so strongly as for the rural banks. The popular banks have, in fact, by their very nature greater facilities for obtaining access to the open money market, and the promoters of the movement even hold that to be bound closely to specific central banks would be a hindrance rather than an advantage to the development of their business. Up to now three provincial federations have established central banks. These banks are companies with limited liability. Their importance is not great.

To equalize the funds of the popular banks, there exists a special section of a private bank, the Dresden Bank, with which the cooperative societies have current accounts, so as to facilitate the movement of their funds and to equalize the various debits and credits. The same institution also serves to facilitate the cashing of bills and checks, which are immediately honored and credited to the respective accounts. In the year 1910 the total value of the bills cashed was 748,000,000 marks.

CHAPTER III.

THE PRUSSIAN CENTRAL BANK FOR COOPERATIVE SOCIETIES AND OTHER STATE BANKS IN GERMANY.

We have had occasion to refer to the Prussian Central Bank. This bank, which itself is in nowise cooperative, is a State institution which serves not only the rural cooperative societies, but also the popular banks and the savings banks.

Founded by the law of July 31, 1895, it received from the Prussian Government an initial foundation capital of 5,000,000 marks, which has been successively increased to 20,000,000 marks in 1896, to 50,000,000 marks in 1898, and, finally to 75,000,000 marks in 1909. This capital has been furnished by the State by means of the deposit of Prussian consolidated stock at 3 per cent. The affiliated banks can further contribute to the increase of the foundation capital by taking shares.

Although placed under the direct control of the State, the bank is an independent corporate body, with its own administration, composed of a committee of management, appointed for life by the King, assisted by a council of experts, consisting of representatives of the cooperative societies chosen by the King. The functions of the council of experts are merely consultative.

The object of the bank is to provide working capital for the following institutions:

(1) Central banks (not for the cooperative societies separately) of any kind of cooperative societies legally established; not only, therefore, for the provincial or general central banks of the rural banks, but also of every other kind of cooperative society.

(2) The loan banks attached to the cooperative land credit institutions landsschaftliche Darlehenskassen).

(3) The provincial or communal personal credit institutions.

(4) The public savings banks.

From all these institutions the bank also receives deposits on current account or savings deposits.

At the end of 1909 the bank had business relations with 52 central cooperative banks, of which 19 were rural and 33 urban. Besides these it counted amongst its ordinary clients 8 loan banks attached to land credit institutions; 6 provincial credit institutions, etc.; 744 public savings banks; and 684 other corporate bodies or individuals.

The means for carrying out its objects the bank derives from the 78,000,000 marks intrusted to it by the Government from the deposits of the affiliated corporations and from loans contracted with other banks.

The bank can not lend to cooperative societies individuality, but only to unions of cooperative societies or to central banks composed of local cooperative societies. It fixes for every central bank a maximum limit of credit, based upon the financial condition of the bank, of the societies which compose it, and of their members. Within these limits loans are granted according to the available capital and to the guaranties offered.

In regard to the form of the loans, they are either given on current account, on the security of bills of exchange (which the bank discounts), or against the deposit of goods or securities. The following are the most important particulars relating to the working of the bank during the year 1909:

	Marks.
Total business done (incomings and outgoings)	15,197,809,000
Total liabilities	199,725,926
Paid-up share capital	76,400,000
Reserve funds	5,400,000
Deposits in hand at end of year	102,740,303
Loans to cooperative societies and similar institutions outstanding at end of year	40,279,662
Loans granted to cooperative societies and similar institutions during the year	737,268,000

In several other States of the Empire similar institutions have been founded on the model of the Prussian Bank and endowed with capital out of the public treasury, either gratuitously or at a low rate of interest. We may mention amongst these the Central Bank of the Agricultural Cooperative Societies of Bavaria, which received a grant of 100,000 marks and advances of 4,000,000 marks, and the Agricultural Bank for the Cooperative Societies of the Kingdom of Saxony, to which advances of 6,000,000 marks were made at various times.

CHAPTER IV.

COOPERATIVE LAND CREDIT SOCIETIES IN GERMANY—"LANDSCHAFTEN" AND "RITTERSCHAFTEN."

Besides the cooperative banks of which the preceding chapters give a summary, there is another very characteristic form of cooperative credit in Germany, that of the Landschaften and Ritterschaften, cooperative institutions, organized generally for a Province or some other administrative unit. Their object is to obtain for their members the credit they require for land improvement by means of bonds guaranteed by the landowners of the Province collectively. The foundation of the first of these German institutions goes back to the end of the eighteenth century. There are now 25.

It is in Prussia, and above all in the five eastern Provinces, the ancient nucleus of the monarchy, that they have always flourished best. Even to-day, 18 are in Prussia and 10 of these in the 5 eastern Provinces. The bonds issued by the 10 Landschaften in the eastern Provinces in 1908–9 amounted to a total of 1,633,135,940 marks.[1]

This is a sufficient proof of the usefulness and of the vitality of this form of cooperative credit, but it will give an even better idea of the important part played by the Landschaften and Ritterschaften to state that the total bonds in circulation issued by the Landschaften in Prussia amounted to 2,742,344,385 marks[2] in 1909, while the total amount of bonds issued by other German institutions, more or less of the same type, was 787,855,425 marks[3] at the same date.

In other terms, this form of cooperation furnished German agriculture, in 1909, with a total of loans on mortgage of more than 3,490,199,810 marks. This is a considerable sum, which it would obviously not have been easy to obtain from the private and purely capitalist banks, and above all at so low a rate of interest, for these societies are satisfied with an interest which does not generally exceed 3½ to 4 per cent.

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[1] Not counting the new Institute of Credit for Brandenburg which only issues bonds of the Central Landschaft.

[2] $653,294 429, or £134,239,113.

[3] $187,686,697, or £38,565,913.

SECTION I.—*Cooperative land-credit societies for large estates in Prussia.*

In Germany the first of these societies was founded in Prussian Silesia. After the Seven Years' War (1756–1763), the great military king and administrator, Frederick II of Prussia, saw that this province, formerly rich and flourishing, was in a deplorable condition. The continual wars, the successive alterations of the currency, and the high price of land, followed by an alarming fall in its price, had almost ruined the landowners.

In 1767 a Berlin merchant, named Büring, presented to the King a scheme for an administrative and financial innovation, based upon the fact that it is the soil itself which represents the greatest part of the nation's wealth. He showed that the land is an asset, and that to obtain for the farmer the credit he required it was enough to give this asset currency, according to the expression of the day. It was, in fact, an anticipation of the fundamental principle underlying the "assignats" which he wished to put in practice in favor of the proprietors of the "noble" estates.[1] To surround these new mortgage bonds with sufficient guaranties and also to gain the confidence of the capitalist, he depended on the principle of cooperation, and proposed to the King to combine the noble proprietors of Silesia in a compulsory cooperative society in which, in exchange for the duties they would have to fulfill, they should be granted the enjoyment of certain privileges.

This scheme of Büring's, at first rejected by the minister, von Hagen, was accepted in its entirety in the royal decree of August 29, 1769. The regulation of July 9, 1770, combined in compulsory cooperative societies the noble landowners of each Principality of Silesia. The union of these societies formed the Generallandschaft of Silesia.

The success obtained by this system was more than satisfactory. The Generallandschaft of Silesia has now been in existence for 140 years, and during that time its energy has permitted it to overcome and almost to avoid the difficulties which generally arise in enterprises of this nature where the interests of the State and those of individuals have to be reconciled. It has been able also to obtain for its members sufficient credit, and always at a rate of interest far lower than that paid in countries and districts where this system of cooperation does not yet exist.

Encouraged by these results, several other Provinces soon followed the example of Silesia.

On June 15, 1777, the "Kur-und Neumärkische Landschaft" for the nobility of the Province of Brandenburg was created by royal charter.

Other charters established one in each of the following Provinces: In Pomerania, on March 13, 1781; in West Prussia, on April 19, 1787; and in East Prussia, on February 16, 1788.

In 1821 the Landschaft of Posen was founded. It was, however, dissolved in 1877 and the "New Association of Credit" (founded in 1857) took its place.

These Landschaften to which the title of "old established" is given to distinguish them from the others have all a semiofficial character. On the one hand the inspection of their business is conducted by the State, which generally intrusts it in the first instance to the president or prefect of the Province, and secondly to the Prussian minister of agriculture. On the other hand, they possess certain prerogatives usually reserved to the State. Thus, for example, in case of nonpayment they have the right to proceed to the administration of the mortgaged lands or to compulsory sale by auction, without recourse to the law courts.

The employees of the Landschaften are indirect employees of the State and generally they have authority to sign certain public documents.

These Landschaften have constitutions varying considerably from each other, being adapted to the special needs of their Province or to those of the moment of their foundation. They have, however, this in common, that each has a committee of management and a general assembly of landowners. The syndics—that is to say, the members of the committee of management—having legal knowledge, receive pay. The other members of the committee and of the general assembly are landowners who receive only an annual indemnity corresponding to their traveling and incidental expenses.

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[1] In German "Rittergüter." They are the estates belonging to the "Ritterschaft," that is, the nobility and landed gentry. Such estates were originally held by military service and the proprietors had manorial jurisdiction and certain administrative privileges.

Four of the five old-established Landschaften, those of Silesia, of Brandenburg, of Pomerania, and of West Prussia, are decentralized. In other words, they are composed each of several cooperative societies or of several almost independent administrative sections. In Silesia each of these cooperative societies disposes of a separate fund, and the engagements undertaken are for this reason covered by a double guaranty, first by the society of the Principality and then by the Landschaft of the Province.

The five Landschaften of which we have spoken were formed directly by the State. Of the 10 other societies of this type in Prussia, 9 were formed by the Provinces and 1 by private initiative. Three Landschaften, formed in Hanover before its union with Prussia, differ from the other Landschaften in that they do not issue bonds, but obtain directly from capitalists the money which they require to lend to their members.

The societies formed by the Provinces did not enjoy the legal advantages enjoyed by the old-established Landschaften. Not till the Prussian law of August 3, 1897, were their legal rights extended. This law also conceded to all the Landschaften that should be founded before the 1st of January, 1900, the privileges of forced administration of estates, of forced sales, and even of the seizure of the movable property of the debtor in case of an estate already mortgaged having deteriorated. These privileges had, however, to be conceded by royal decree in each new case.

The same law recognized the bonds of the Landschaften as a trustee investment.

When we consider the whole class of Landschaften we see that they have in their organization and in the management of their affairs certain features in common. The total number of landlords of a district collectively grant a loan to the proprietor applying for it, the object of the loan being stated in detail in the application. He can not be refused this demand. His land serves as security to the Landschaft.

To be quite safe and not to risk losses, the body of proprietors do not grant loans exceeding a certain percentage of the value of the land, varying with the Provinces and according to the method of fixing the rate of interest. As the body of landlords possess real estate of enormous value, but have seldom large sums of money at their disposal, they have to get from third parties the sums needed for loans to the landowner borrowing. For that they have recourse indirectly to the capitalists, offering them, as investments for their money, bonds issued by the collective group. In order to render the negotiation of this paper easier for the lenders, special banks have been instituted in connection with the Landschaften dealing with this business, under the control of the society itself and without any intention of making a profit. The profits go to the Landschaft as such. Formerly it was the mortgaged land that served as security under a secondary security of the Landschaft. To-day this is no longer the case. The capitalist who has bought the bonds and is the creditor of the borrowing landowner has nothing to do with him. He receives his interest from the Landschaft and the whole of the estates of the Province forms his security.

This general security of the "Kreditverbundenen" (credit leagues) was not, however, considered sufficient. To protect the legitimate interests of the creditors as well as those of the other guarantors, a complicated system was elaborated. First, the value of each property in need of a loan had to be estimated by competent employees of the Landschaft. Generally they contented themselves with the valuation of the revenue made for the land tax and they granted loans to the extent of fifteen times this net revenue. Only in exceptional cases—for example, when the proprietor wanted to burden his land beyond a certain degree—he must, even to-day, at his own expense get a special valuation made of the present worth of his land.

At first most of the Landschaften only gave mortgages for one-half of the estimated value. Now they generally go as far as to give them for two-thirds of the value. Land already burdened with other mortgages can not receive any loan from the society. The Landschaften, however, help proprietors when, in order to obtain a loan, they desire to pay off previous mortgages.

Except in the case of the three institutions of Hanover, the loans are not granted in money, but in bonds.

The interest the debtor must pay the Landschaft is generally from one-half to 1 per cent higher than what the Landschaft itself pays its creditors.

This difference serves to cover the expenses of administration, to constitute special funds created in the interest of all the members of the society, as well as for the creation of reserve funds and for the gradual extinction of the debt. The Landschaft generally renounces its right of calling up the money it lends, but the debtor can always repay the money borrowed. Generally this repayment takes place by gradual extinction, which is often even obligatory, for a certain proportion of the debt. The sums so repaid must be considered at the same time as reserves in case of possible loses to be incurred.

Nowadays the tendency is to decrease these various guaranties. Perhaps they are no longer necessary. The new Landschaften, for instance, no longer have the general guaranty. In the Mark and in Neuvorpommern the security is limited to the whole of the lands really mortgaged. In other Provinces there are special reserve funds, or, rather, the obligation for the proprietors to pay in case of need a certain fraction, generally from 5 to 10 per cent of the sum borrowed. Consequently we find in these Landschaften the principles sometimes of the cooperative society with unlimited liability and sometimes of the cooperative society with limited liabilty.

The public accepts the bonds of all these institutes with equal readiness, for the form taken by the security offered does not affect their credit.

The total circulation of bonds issued by the Prussian Landschaften increased from 469,407,530 marks in 1866 to 2,507,164,675 marks in 1906 and 2,742,344,385 marks in 1909. This would seem to represent an astonishing increase of debts on mortgage, but it is difficult to know whether, before the landowners availed themselves of the credit offered on such easy terms by the Landschaften, their properties were already burdened with other debts, perhaps on less favorable conditions, or if their debt is of more recent origin. It is noteworthy also that while the increase of the debt recorded in the Landschaften books has increased fivefold in the 40 years from 1866 to 1906, in the same period the funds for its extinction have increased from 20,512,945 marks to 169,901,635 marks, or in the proportion of 1 to 8. This mode of extinction, besides, was unknown to the old-established Landschaften and was only introduced in the last century. It may therefore be expected that this progress will continue.

The rate of interest on the bonds has always been very moderate. Issues at the rate of 5 per cent were only made from 1868 to 1878, a period of trouble and unrest in spite of abundance of capital. Generally there has been a very marked tendency to follow the conditions of the market and as soon as possible to reduce the interest on the bonds. In 1901 we no longer find bonds at 4½ per cent. Those at 3½, 3½, and 3 per cent increase already in 1896 in proportion as those at 4 per cent decrease, though the latter show a further increase in 1901.

The bonds have always been well received on the national market. To open the international market to them in 1873 certain Landschaften, with the authorization of the Government, founded a Central Landschaften for the Prussian Provinces, with its headquarters at Berlin. The Landschaften that new form part of it are allowed to issue provincial bonds and also bonds of the Central Landschaft. In issuing these last, however, they are bound to observe certain rules as to the method of valuing the lands.

The bonds of the Central Landschaft were well received on the exchanges, where they had almost the same standing as the imperial and Prussian bonds, but generally speaking, the Central Landschaft had not the success that was expected. That was due, no doubt, to the fact that the societies already had a sufficiently large clientele or that they did not wish to have their liberty of action interfered with. Its issue of bonds up to the end of 1909, amounting to 437,814,250 marks, was rather less than that of the Landschaft of East Prussia alone, which reached the figure of 443,839,850 marks.

SECTION 2.—*Landschaften for small estates in Pressia.*

Although the Landschaften and Ritterschaften were at first exclusively intended for supplying the needs of the noble estates, which were generally of considerable size, some of them have extended their credit facilities to small proprietors and peasants. This was the case with the Landschaften of East Prussia and of Silesia. This latter issues special bonds for peasants' lands.

Others founded separately, with special funds, new Landschaften and new institutes. Most of the new societies, such as those of Westphalia and Posen, were, moreover, from the start meant to represent both classes.

Since these new institutions only wish to serve the farmer, there is always a limit to the minimum value of land that can be mortgaged. This limit corresponds to that amount of land on the produce of which the owner can live. Generally it is required that it produce a net income calculable for the land tax at a minimum from 75 to 150 marks. In Silesia they go below this limit and are content that the land be reckoned as bringing in from 15 to 30 marks.

To make it easier and less complicated for the peasants, instead of their having to go to the central office, the Landschaft of East Prussia periodically sends employees of its own into the villages, previously notifying their advent. These employees give all necessary information gratuitously and receive applications for loans. The Landschaften have, generally speaking, also had good results in their work on behalf of the peasants, but there still remains much more to be done in the future.

SECTION 3.—*Landschaften in the other States of Germany.*

The example set by Prussia has been followed in some other States. Thus a credit association for the noble estates of the two Mecklenburgs was founded in 1818 at Rostock on the model of the old-fashioned Landschaften. On December 13, 1825, the credit association for Wurttemberg was founded at Stuttgart. It is the only semiofficial institution of the kind to be found in South Germany. Others were subsequently formed in the Kingdom of Saxony and in the Duchy of Brunswick.

Only a few of these institutions possess much importance, and all conform more or less closely to the type of Landschaften already described.

SECTION 4.—*Private institutions of the Landschaften type.*

Besides the semiofficial Landschaften there are two private institutions of a similar kind.

These are:

1. The National Society of Mortgage Credit, formerly at Stettin and now in Berlin, founded under rules dated March 3, 1870, and August 11, 1871.

2. The Bavarian Agricultural Bank at Munich, founded on December 2, 1896.

Both are, in the eyes of the law, private cooperative societies. The first is a cooperative society in which the liability of the members is unlimited, while in the second their liability is limited.

The Berlin Association also grants loans upon town lands. The total number of loans of every kind to the credit of this society in 1907 were 651, for a total sum of 20,367,673[1] marks, which gives an average of 31,268 marks per loan.

The Bavarian Bank grants loans to communes and to country landowners. At the date of its foundation it received from the Bavarian State the grant of a loan, on favorable conditions, of 1,000,000 marks. It is also in enjoyment of another loan at reduced interest and a subsidy for the expenses of its management. The total number of loans of every kind outstanding at the end of 1907 was 14,675, amounting to 91,397,893 marks.[2]

These two institutions are most important, particularly in presenting a new method which permits the farmers, and especially the small farmers, to obtain a large share of the advantages given by the Landschaften.

The Bavarian Agricultural Bank, particularly, has had excellent results and under circumstances of some difficulty, if we consider how the land is parceled out in small holdings in South Germany and especially in Bavaria. Between 1897 and 1907 the Bavarian Bank granted 14,583 loans on mortgage to a total amount of 103,367,250 marks. Of these 287 loans were on mortgage of holdings less than 1 hectare in extent; 8,653 between 1 hectare and 10 hectares; 5,605 between 10 hectares and 100 hectares; and 38 over 100 hectares. These figures indicate how well it has been able to adapt itself to the needs of different classes of agriculturists.

CHAPTER V.

COOPERATIVE AGRICULTURAL CREDIT IN AUSTRIA.

In Austria both the Raiffeisen and the Schulze-Delitzsch systems have been adopted as means of giving personal credit to the agricultural population. The

[1] $4,852,085, or £997,008.

[2] $21,773,244, or £4,473,972.

Raiffeisen Banks are, however, in relation to agriculture, much the more important.

Cooperative credit societies began to be formed in Austria about 1850, and they had at first the character of mutual-aid societies. Toward 1870 the earliest societies on the Schulze-Delitzsch system were formed; the majority were based on unlimited liability.

At first the cooperative credit societies developed slowly, and up to 1860 only 15 had been formed. After this they began to be formed more rapidly, reaching the number of 943 in 1872. Then again followed a period of slow increase, the number only rising to 1,363 in 1888. At this period, however, the Raiffeisen system began to be promoted, and the cooperative credit societies increased rapidly in number. At the end of 1906 they had reached 7,886; in 1909 they had risen to 10,097; and in 1910 to 10,893.

SECTION 1.—*The rural banks.*

The Raiffeisen banks, first formed in 1886, began to be promoted rapidly in 1889, reaching the number of 7,631 in 1911.

The Raiffeisen banks in Austria being modeled upon those of Germany, it is sufficient to remark that each member is required to take a share, which varies in amount from 10 to 20 crowns,[1] but the liability of the members is unlimited. At the beginning of November, 1911, the Austrian Government presented to Parliament a bill for modifying the laws relating to cooperative societies. The main purpose of this bill is to substitute for the present form of unlimited liability the system of unlimited liability to make supplementary payments. The difference between the two systems consists in the fact that, according to the new proposals the creditor would not be able to have direct recourse, in case of the liquidation of the bank, to any particular member to demand the payment of the sum which remains due to him; it would be the society which would be responsible to the creditor, and it would have the right to demand pro rata payments from the members until the creditors were completely satisfied.

The interest paid on the shares is equal to that paid on the savings deposits.

The working capital of the banks is formed by the shares, the savings deposits, and the loans which the banks obtain from the central banks. The Raiffeisen banks have been very successful in attracting savings deposits. In Bohemia alone the sums deposited by boys and servants occupied in agriculture amounted in 1908 to 5,588,078 crowns.

Many banks require the applicant for a loan to declare the purpose which it is to serve; sometimes it is provided that if a member applies a loan to any other than the declared object he shall be excluded for a time (or, in case of a second offense, forever) from receiving further loans.

The profits are carried entirely to the reserve fund, which in case of the dissolution of the society is devoted to some work of public utility.

As in Germany, the Austrian rural banks are affiliated both to central banks, with which they deposit their surplus funds, or from which they obtain loans when required, and to federations, which look after their interests.

The establishment of Raiffeisen banks is greatly encouraged by most of the provincial governments, which make grants of from 200 to 300 crowns for the initial expenses and loans for long periods without interest. In 1909, for example, the diet of Galicia placed at the disposal of the provincial government a sum of 2,000,000 crowns for the benefit of the cooperative credit societies. Ten years later the diet established the Provincial Bank for Cooperative Credit Societies at Leopoli, by which the fund is now administered.

The following figures will give an idea of the development of the Raiffeisen banks since 1900.

	1900	1904	1907
Number of banks	2,906	4,557	5,880
Number of members	261,589	504,589	725,666
Number of loans granted	59,531	108,886	.....
	Crowns.	*Crowns.*	*Crowns.*
Amount of loans outstanding at the end of the year	122,501,009	258,532,000	[2] 428,242,262
Amount of deposits	155,281,000	335,620,000	556,319,345

[1] A crown is equivalent to 0.2026 dollar, or 0.0416 pound sterling.
[2] $86,772,253, or £17,829,986.

In 1890 there was one Raiffeisen bank for every 131,294 inhabitants; in 1909, one for every 9,002; in 1902, one for every 6,884; and in 1910 one for every 4,018 inhabitants.

SECTION 2.—*The popular banks.*

It is not necessary to speak at length of the popular banks, since they have only a minor importance as far as agriculture is concerned. Until the formation of the Raiffeisen banks, the Schulze-Delitzsch banks afforded credit to farmers to a considerable extent, but now the Raiffeisen banks have almost completely taken their place. Even up to now the Schulze-Delitzsch banks make loans for fairly large amounts to farmers known to be of good financial standing; the small loans of a few hundred crowns required by the peasants are made exclusively by the Raiffeisen banks. Only in Bohemia, in Moravia, and in Galicia are the Schulze-Delitzsch banks at all numerous amongst the farmers and serve to supply their needs.

At first in the Schulze-Delitzsch banks unlimited liability was the rule, but from 1882 onward this was less and less frequently adopted, and now new banks are founded almost exclusively with limited liability. In 1910 there were 2,674 banks with limited liability and 588 with unlimited liability.

Of 2,323 Schulze-Delitzsch banks which furnished particulars of their working in 1908, the membership was 1,479,047; the share-capital 158,000,000 crowns; the loans granted during the year, 1,757,000,000 crowns;[1] the loans outstanding at the end of the year, 1,704,000,000 crowns;[2] the deposits in hand, 1,587,000,000 crowns; the loan capital, 234,000,000 crowns; and the reserve funds, 94,000,000 crowns.

CHAPTER VI.

COOPERATIVE AGRICULTURAL CREDIT IN ITALY.

The principal agricultural cooperative credit institutions in Italy are the rural banks and the popular banks. The former are modeled on the Raiffeisen banks and were introduced into Italy by Leone Wollemborg; the latter are modeled on the Schulze-Delitzsch banks, adapted to the special circumstances of Italy by Luigi Luzzatti. The principles upon which these two forms of credit society are based have, therefore, been already described and we will confine ourselves to indicating how they are organized and how they operate in Italy.

SECTION 1.—*The rural banks.*

Rural banks were first advocated in Italy in 1880, but it was only in 1883 that Wollemborg, after a series of lectures and publications, succeeded in founding the first rural bank at Loreggia, in the Province of Padua, with 30 members. In 1884 other banks were founded at Cambiano di Castelfiorentino, at Trebaseleghe, and subsequently in other parts of Venetia. The banks formed by Wollemborg and his associates were unsectarian in character, but from 1892 onward many banks were formed as a result of the propaganda of the Catholic party with a sectarian character. These have steadily increased in number and now form the largest group of rural banks in Italy. In fact, out of 1,800 rural banks about 1,200 are sectarian. The Catholic banks are found chiefly in Venetia, in Bergamaseo, in Emilia, and in Sicily.

While the rules of all rural banks insist upon honesty and good character as a condition of becoming a member, the Catholic banks insist also upon certain religious observances, or, at any rate, upon respect for religion.

The liability of the members is unlimited. This is found, in Italy as elsewhere, to prevent the misuse of loans by compelling the members to keep an eye upon one another; it also gives the bank the confidence of the public which deposits its savings.

For their sphere of operations the rural banks restrict themselves to a commune, to a portion of a commune, or to a parish.

As a rule the rural banks have no real initial capital. They receive savings deposits from both members and nonmembers (chiefly the latter), on which they pay an interest varying from 3½ to 4 per cent. It is the deposits which furnish the means for making loans, and only in so far as the deposits are insufficient

[1] $356,010,748, or £73,153,183.

[2] $345,271,664, or £70,946,514.

do the rural banks have recourse to other sources of capital. On December 31, 1910, the aggregate amount of the deposits held by rural banks was 60,000,000 francs.[1] In process of time the banks create a capital of their own, formed of the small payments made by the members upon entrance, or upon taking out their first loan.

The loans, which are generally made on the security of bills, are of two kinds. They are either for short periods, not exceeding two years, or for longer periods, extending to as much as 10 years. The first kind are ordinarily renewed every three months; the second are repaid by installments. The interest on loans for long periods is slightly higher than the usual rate of interest on loans, which varies between 5½ and 7 per cent. The difference between the interest charged on loans and the interest paid on deposits covers the management expenses and enables a reserve fund to be built up, which, in the event of the dissolution of the society, is devoted to some object of public utility.

The societies enjoy certain exemptions from taxation. Thus their notes, bills, etc., are exempt from taxation for 10 years, and until the capital of the bank reaches 30,000 francs.

There are no recent statistics embracing all the rural banks, unsectarian or Catholic, in Italy. The latest official statistics, collected by the minister of agriculture, industry, and commerce, gives the financial position of 1,257 banks out of 1,386 existing on October 31, 1905. This shows that of total liabilities amounting to 46,665,607 francs[2] 32,499,462 francs were in respect of deposits, while 4,855,456 francs were in respect of loans on current account, and 6,392,654 francs of loans on the security of bills. The loans outstanding were as follows: On bills, 33,464,274 francs; on mortgage, 897,493 francs; on simple note of hand, 369,041 francs; on current account, 5,978,556 francs; total, 40,709,364 francs.[3]

Since 1906 no official statistics have been published, but the National Federation of Italian Rural Banks, which has its headquarters at Rome, has compiled a list of rural banks and agricultural cooperative credit societies in existence on December 31, 1911, from which it appears that there were then 1,855, of which about one-third were unsectarian and the remainder Catholic.

Though complete statistics are wanting, there exist partial statistics, compiled by regional or provincial federations, from which we take the following figures:

Name of federation.	Date which the figures refer.	Number of affiliated rural banks of which particulars are given.	Membership	Loans outstanding.	Deposits in hand.
				Francs.	*Francs.*
Federation of the Rural Banks of the Province of Bologna	June 30, 1911	80	6,505	2,263,762	2,608,945
Federation of the Rural Banks of Romagna	Dec. 31, 1910	57	4,723	2,909,040	2,826,671
Federation of the Catholic Economico-Social Associations of the Province of Parma	.....do.....	39	3,771	2,033,892	1,683,000
Economico-Social Federation of the Catholics of the Diocese of Adria	.....do.....	52	3,945	2,595,424	1,795,004

SECTION 2.—*The popular banks.*

Unlike the rural banks, which carry on their work in country districts and have restricted area of operations, the popular banks are formed in urban centers and have a large field of operations. In the popular banks, too, the liability of the members is limited.

They preceded the rural banks, but even after the appearance of the latter they continued to be of service to agriculture in various ways. Not only do they lend money directly to farmers, but they make advances at low rates of interest to agricultural syndicates, agricultural cooperative societies, and even to the rural banks.

The popular banks are composed of members belonging to many different classes—large and small farmers, farm laborers, artisans, small shopkeepers,

[1] A franc is equivalent to 0.1929 dollar or 0.0396 pound sterling.
[2] $9,004,450, or £1,850,239.
[3] $7,855,152, or £1,614,080.

clerks, and professional men. But the larger number of members belong to the lower middle classes; 23 per cent are artisans or small shopkeepers and 22 per cent small farmers. Clerks and professional men form 17 per cent, and the percentage of the other classes of members is much smaller than these.

The value of the shares also varies greatly. It ranges from a minimum of 5 francs up to 100 francs, the maximum allowed by the commercial code. The lower values are the more usual.

The paid-up share capital is usually but little less than the subscribed capital, because many banks allow the payment by installments of the shares subscribed.

The banks work in the first place with the capital which comes in spontaneously, the shares and the deposits, and, secondly, with money which they obtain by rediscounting their bills or contracting loans.

As to the deposits, they are of various forms. The humbler classes, not used to business methods, intrust their savings to the banks as savings deposits; the commercial and industrial classes prefer to lodge money on current account and to withdraw it by means of checks; the workmen's unions and mutual aid societies deposit funds not immediately required for fixed periods and draw good rates of interest. This variety in the deposits contributes to give elasticity to the operations of the popular banks. The interest paid on deposits varies from 3 to 4 per cent.

The Italian popular banks give credit principally in the four following forms: Loans on the security of bills or the discount of bills; loans against the deposit of securities, goods, or valuables; loans on guaranteed current account; and loans for holding over delivery of securities. In order to increase the capital at their disposal they have the greater part of their bills rediscounted by larger institutions. Against this must be set, however, the bills which they themselves rediscount for other smaller popular banks and for rural banks.

The rate of interest on loans is usually from 4 to 6 per cent. Sometimes it is less than 4 per cent, and there are cases in which it is as much as 7 or 8 per cent.

The latest official statistics of the popular banks relate to the 10 years from 1899–1908. From these we find that in 1908 there were 736 popular banks. Of these, 690, which furnished particulars of their working, had a paid-up capital of 98,310,108 francs and reserve funds amounting to 57,354,279 francs. The total deposits in hand at the end of the year were 971,167,644 francs and the capital obtained from outside sources (other banks and private capitalists, etc.), 230,152,110 francs. This gives a total working capital of 1,356,984,141 francs.[1] The loans outstanding at the end of the year amounted to 881,502,350 francs[2] and the profits during the year to 13,679,929 francs.

CHAPTER VII.

COOPERATIVE AGRICULTURAL CREDIT IN FRANCE.

The first experiments in agricultural credit in France date back to the middle of the past century, but its real development only begins after the promulgation in 1884 of the law on professional syndicates.

In 1894 the law which instituted local agricultural mutual credit banks gave a powerful impetus to agricultural credit, and in 1899 the law on regional banks, which authorized the giving of State aid, consolidated agricultural credit in France into an organic system which to-day spreads over the whole country.

The characteristics of this system are the following: Decentralization, mutuality, organization according to occupation, and State aid. Its object consists in the first place, in supplying farmers with the means necessary for carrying on the ordinary agricultural operations by means of loans for short periods; in the second place, to facilitate cooperative societies and individual farmers in carrying on operations extending over long periods.

Besides the cooperative credit encouraged by the State there exists also various minor groups of cooperative institutions which have wished to remain entirely independent and which rely solely on their own resources.

SECTION 1.—*State-aided cooperative credit.*

The fundamental laws which regulate the State-aided system of agricultural cooperative credit are those of November 5, 1894, and of March 31, 1899.

The former instituted the local mutual agricultural credit bank; the latter the regional bank, which groups together the local banks of a given district, either

[1] $261,839,430, or £53,802,887.

[2] $170,091 946, or £34,950,572.

the region, the department, or a special area determined by its agricultural characteristics.

The State has placed at the disposal of the regional banks, in order that they may in their turn finance the local banks, considerable sums, which the Bank of France is bound to pay to them as a condition of the renewal of its privileges. The law of November 17, 1897, in fact, laid it down that the Bank of France must advance to the State, without interest, for the whole period of its concession (that is, to the end of 1920), a loan of 40,000,000 francs, and that it must also make an annual payment (calculated according to the business done) which must not be less than 2,000,000 francs and is, in fact, between 3,000,000 and 5,000,000 francs. These sums form the State fund, out of which the agricultural credit system is aided.

(*a*) *The local banks.*—The local banks may be composed either of the whole or of a part of the members of one or more agricultural syndicates, or of the members of one or more mutual agricultural insurance societies. The object of this provision is to strengthen their characteristic of mutuality and solidarity and to facilitate mutual acquaintance and confidence amongst the persons composing the credit society.

The objects of a local credit society are to facilitate or to guarantee the operations either of the societies mentioned or of the members.

The local banks have a restricted area of operations, limited to the commune, the canton, or the village. The formalities of registration are reduced to a minimum, and they are exempted from certain taxes.

Their initial capital is formed by shares ("quotes-parts"), subscribed exclusively by the members; it is sufficient if one-fourth is paid up. The shares, which are generally of the value of 20 or 40 francs each, do not give any right to dividend, but bear a fixed rate of interest, which must not exceed 4 per cent. The societies can receive deposits with or without interest.

As to the liability of the members, the law allows the utmost latitude to the societies to decide its character and extent by their rules, according to local conditions. In the majority of cases the societies have decided that their members shall be liable up to the amount of the shares subscribed. Some have fixed upon a wider liability, either unlimited liability of all the members, such as is found in the Raiffeisen banks, or unlimited liability of a certain number of members (for example, the members of the committee of management), or a liability extending to two, three, or four times the nominal value of the shares of each member. Amongst the promoters of these societies, however, there is now manifest a tendency to adopt unlimited liability as the best safeguard for healthy cooperation.

The society is managed by a council and by a committee, which generally comprises a president, a vice president, and a secretary. As soon as it is established it becomes affiliated to the regional bank of the department. To do this it must subscribe for a certain number of shares in the regional bank. It is then admitted to partake in the credit facilities afforded by the regional bank, which discounts its bills or grants loans to it to form its working capital.

In the first case, when a member applies for a loan from the local bank it requires him to sign a bill, which is then sent to be discounted to the regional bank, which immediately forwards the amount applied for, less the discount. In the second case, the regional bank grants to the local bank a loan which is usually proportionate to the amount of the shares subscribed. The local bank, when it does not immediately require the money so obtained, deposits it with the savings bank and withdraws from time to time such sums as may be necessary.

The first system, which is simpler and allows of a greater measure of control by the regional bank over the affiliated societies, is adopted in the great majority of cases. Thus, for example, in 1910 the regional banks discounted bills to the amount of 67,000,000 francs and only granted loans of 1,250,000 francs.

The rate of interest on the loans must naturally be higher than the discount required by the regional banks. The latter being 3 per cent, the interest demanded by the local banks does not usually exceed 4 per cent. The margin of 1 per cent serves for the payment of the expenses of management and for the formation of the reserve fund.

As to the size of the loans, in some societies the sums which may be advanced to members are proportionate to the shares which they have subscribed, and may be ten, fifteen, or twenty times their amount. In other societies it is laid down that the loan shall not exceed a fixed sum, 1,000 or 2,000 francs, according to the kind of cultivation prevailing and to the solvency of the applicant.

There are different kinds of guaranty, varying according to circumstances. Certain banks insist in every case upon a surety or a "warrant," or upon the deposit of securities. Others only require such guaranties when the loan is of a certain amount. If the object of the loan is the purchase of live stock, the animals must always be insured.

The period of the loans varies, according to the nature of the operations to be undertaken, from three months to a year. The period of the bills varies according to the period of the loan and according to the system adopted by the regional bank to which the local bank is affiliated. Many regional banks only allow bills of three months, with two, three, or four renewals; others allow bills for a period equal to that of the loan. In the case of renewals an installment is almost always required.

At least three-fourths of the profits of the society are allocated to the formation of a reserve fund until that fund is equal to half the paid-up share capital. The balance, if the general meeting so decide, may be divided amongst the individual members in proportion to their dealings with the society.

When a society is dissolved, the reserve fund and other assets are divided amongst the members in proportion to their shares unless (as is generally the case) the rules have provided for their application to some work beneficial to agriculture.

The local banks have spread rapidly since 1900, as the following figures indicate:

Year.	Number of local banks.	Membership of local banks.
1901	309	7,998
1905	1,335	61,874
1910	3,338	151,621

The following figures give an idea of the business done by the local banks in recent years:

	1909	1910	Increase.
Number of local banks	2,983	3,338	355
Membership	133,382	151,621	18,239
	Francs.	*Francs.*	*Francs.*
Subscribed capital	13,111,206	14,210,598	1,099,392
Paid-up capital	8,470,754	9,916,611	1,455,857
New loans granted during the year (exclusive of renewals)	63,742,093	[1] 70,533,340	6,791,247
Loans outstanding at the end of the previous year	40,126,197	42,671,323	2,545,126
Total	103,868,290	113,204,663	9,336,373
Repayments received	60,889,309	61,388,806	499,497
Loans outstanding on Dec. 31	42,978,981	[2] 51,815,857	8,836,876

[1] $13,609,893, or £2,796,567. [2] $9,998,226, or £2,054,440.

The official reports do not indicate the capital of the local banks separately, nor the business done by them, but limit themselves to giving such particulars for the groups of local societies affiliated to each central bank. From these data, however, it is evident that the capital of the local banks is not very large, and the same may be said of their reserve funds. The statistics give no information regarding the deposits, but it may be assumed that they, too, are not very large in amount.

The interest paid on the shares varies from 2 to 5 per cent; the rate of discount from 3 to 5 per cent.

(*b*) *The regional banks.*—The agricultural credit banks of the second degree, called regional banks, are regulated by the law of March 31, 1899. They receive from the State, out of the funds furnished by the Bank of France, loans without interest, up to the amount of four times their paid-up capital, for a period of five years, subject to renewal. If, for example, there are in a department 10

local banks which have each subscribed 10,000 francs their shares form an initial capital of 100,000 francs for the regional bank; the Government will then make an advance of 400,000 francs.

A special committee nominated by the minister of agriculture distributes such sums amongst the regional banks, and a body of inspectors supervises their working.

The regional banks are based upon the same principles as the local banks and they enjoy the same privileges. They are composed of local banks and of individual farmers, but two-thirds of the shares are reserved by preference to the former. The local banks usually pay up their shares in full; the individual members as a rule only pay up one-fourth. Each member is liable up to the amount of the shares subscribed. The committee of management of a regional bank is elected from the representatives of the local banks.

The law limits the interest on the shares to a maximum of 5 per cent, and fixes the maximum of the deposits which the regional banks can receive and the bonds which they may issue at three-fourths of the amount of the securities which they hold.

The regional banks can, moreover, have their bills rediscounted by the Bank of France or other credit institutions.

The profits are carried to the reserve fund which serves, in due course, to repay the State loans.

To the primary object of the regional banks have in recent years been added others, namely, the making of loans to cooperative societies for the production and sale of agricultural produce, and of loans to individual farmers for the acquisition and improvement of small holdings For these purposes special advances are made by the State to the regional banks out of the fund provided by the Bank of France.

The number of regional banks has increased from 9 in 1901 to 66 in 1905 and 96 in 1910.

The State has placed at the disposal of the regional banks in the period 1900–1910 the following sums:

	Francs.		Francs.
1900	612, 250	1906	3, 717, 530
1901	2, 611, 210	1907	5, 800, 157
1902	1, 304, 337	1908	8, 750, 717
1903	1, 858, 262	1910	9, 825, 260
1904	5, 437, 969	1911	11, 386, 815
1905	5, 430, 301		

On December 31, 1910, the regional banks had at their disposal State loans to the amount of 57,177,425 francs, of which 50,442,585 had been advanced to them for the purpose of financing the local banks. Sixty-seven of the regional banks received advances not exceeding 250,000 francs; 33 sums varying between 250,000 francs and 1,000,000 francs; and 15 sums between 1,000,000 francs and 4,000,000 francs.

The working capital at the disposal of the regional banks in 1910 for the financing of local banks was 71,423,930 francs (as compared with 61,823,926 francs in 1909) and may be thus classified:

	Francs.
Paid-up capital	15, 912, 801
Reserve funds	2, 868, 544
State advances	40, 442, 585
Mean amount of deposits	2, 200, 000
Total	71, 423, 930

The subscribed capital amounted, in the aggregate, in 1910 to the sum of 17,493,225 francs. Of this sum about two-thirds is represented by the shares subscribed by the local banks. In the separate banks the paid-up capital ranged from a minimum of 7,175 francs to a maximum of 1,021,400 francs; about half have a paid-up capital of less than 100,000 francs.

The interest paid upon the shares varies from 3 to 4 per cent.

The aggregate amount of deposits received by the regional banks up to December 31, 1910, was 16,500,000 francs, the average amount of the deposits in hand being about 2,200,000.

The discounts and loans made in 1910 by the regional banks, in accordance with the law of 1889, including renewals, reached the sum of 130,865,263 francs.

as compared with 123,222,174 francs in 1909. The majority of the regional banks (55) have adopted a rate of discount of 3 per cent.

The general expenses amount to 0.32 per cent of the loans.

Without taking into account the renewals, the following figures show the loans made by the regional banks, etc., in 1910, as compared with 1909:

	1910	1909
	Francs.	*Francs.*
Direct loans for working capital	1,251,220	[1] 1,480,180
Loans in the form of discounts of new bills	66,957,353	[2] 61,262,856
Loans outstanding at the end of the previous year	40,971,508	38,022,643
Total	109,180,081	100,765,679
Repayments received during the year	59,887,572	59,502,992
Loans outstanding at the end of the year	49,292,509	[3] 41,262,687

[1] $285,611. or £58,687. [2] $11,821,090, or £2,429,003. [3] $7,961,919, or £1,636,019.

If to the loans for short periods are added those for long periods advanced to cooperative societies and individual farmers, we have the following figures:

	Francs.
Loans for short periods	109,180,081
Loans to cooperative societies	2,284,265
Loans for long periods to individuals	864,190
	[1] 112,328,536

To the end of 1910, 131 cooperative societies had received 4,405.840 francs in loans at rates of interest varying from 1 to 2 per cent.

(*c*) *General results.*—The general results achieved in the first decade in which the system of State-aided agricultural credit has been in force are most satisfactory. The local banks are constantly increasing and respond even better to the new needs of agriculture. In the period from 1900 to 1910 they have placed about 384,000,000 francs at the disposal of farmers; the 2,000,000 francs advanced in 1900 have risen to 70,000,000 francs in 1910.

It is noted, however, that many regional banks, trusting too much to State aid, are not sufficiently careful to make the quinquennial repayments of the loans advanced by the State, and neglect to form resources of their own, other than the sums carried automatically to the reserve, by making efforts to attract deposits. The remark also applies to some of the local banks. In view of this, closer Government supervision is recommended, and meanwhile the ministry of agriculture has reorganized and strengthened the service of inspection.

SECTION 2.—*Independent cooperative agricultural credit.*

We have seen that, besides the State-aided cooperative credit banks, there exist cooperative credit institutions which have wished to remain independent of any financial aid from the State. Let us examine briefly the character and results of the principal groups of these societies.

(*a*) *Rural banks of the Raiffeisen-Durand type.*—The rural banks promoted by Louis Durand are modeled on the pure Raiffeisen type and are markedly Catholic in character. Their members take no shares and receive no dividend. For their working capital they avail themselves of deposits, loans from members and others, and the accumulated profits which form the reserve. When the reserve fund reaches a fourth of the capital deemed necessary for the working of the society, the rate of interest on loans is reduced to a figure just sufficient to cover the general expenses.

Loans are only granted to members, who are usually small proprietors or tenant farmers, for a definite purpose. They are granted on personal security or on mortgage often for rather long periods with repayment by annual installments, at a rate of interest varying from 3½ to 4½ per cent. The interest paid on deposits varies from 2½ to 3½ per cent. The members are liable to the full extent of their possessions for the debts of the bank.

[1] $21,674,564, or £4,453,699.

The rural banks have adopted the commune as their sphere of operations and are combined in regional or diocesan groups, called central banks, which besides acting as propagandist and supervising bodies, receive the surplus capital of the richer banks and pass it on to those which have need of it. The rural banks are also affiliated to a central federation, the Central Union of Rural and Workmen's Banks with Unlimited Liability, with headquarters originally at Lyons, but now at Paris.

In 1893 the number of the Durand banks was 17; in 1905 it had risen to 443. The statistics for 1910 give their number as 672, but the union states that this does not include all the existing banks.

The 672 banks of which particulars are given contained 28,279 members, did a total business (incomings and outgoings) of 19,241,963 francs, collected 11,300,450 francs in deposits, and granted 9,396 loans; their total assets amounted to 12,569,915 francs and their profits to 49,124 francs. The business of the banks is based almost entirely upon deposits; they obtained only a small sum (935,000 francs) from the central banks.

(*b*) ***Mutual banks of the Rostand type.***—With the idea of directing local savings to local work, Eugene Rostand urged the Savings Bank of the Bank of Rhone, of which he was president, to establish local mutual banks and to finance them with loans. The law of 1895, which authorized the savings banks to allocate part of their funds to agricultural credit, permitted the bank to advance 20,000 francs to the local banks by way of loans.

In the period from 1894 to 1909 there were thus created 22 banks. The Savings Bank of Marseille granted them in 1909 loans to the amount of 45,000 francs. From 1901 to 1909 the Rostand banks had distributed 1,142,663 francs to farmers.

(*c*) *Other cooperative agricultural credit societies.*—Amongst the cooperative credit institutions which have arisen through private initiative we may mention the cooperative credit banks of the Alpes-Maritimes promoted by Rayneri, and the Popular Bank of Mentone. These follow the unlimited-liability system and are to-day combined in the Regional Bank of Mentone.

There also exist some isolated credit institutions which act in complete independence, such as the Mutual Credit Society of Senlis (Oise) which granted loans in 1908 to the amount of 438,888 francs, and the Agricultural Bank founded in 1898 at Boulogne-sur-Mer, which, up to 1909, had discounted bills to the value of 1,734,000 francs.

(*d*) ***The urban popular banks and agricultural credit.***—In France there are some popular banks of the Schulz-Delitzsch-Luzzatti type. They are fairly numerous in the South and are combined in the Federal Center of Popular Credit, managed by M. Rayneri. Although primarily intended for the industrial and commercial middle classes they encourage agricultural credit in a variety of ways. Of late a new tendency has manifested itself to bring about closer relations between the urban and rural cooperative credit institutions.

CHAPTER VIII.

COOPERATIVE AGRICULTURAL CREDIT IN BELGIUM.

Not many years ago the Belgium farmers in general, and more particularly the small farmers, were absolutely without any credit institutions to which they could have recourse to obtain capital on equitable terms. In 1884, however, a law was passed with the object of providing them with credit facilities.

Under this law the General Savings Bank was authorized to employ a part of its funds in making loans to farmers and to agricultural cooperative credit societies. The loans to farmers were to be made through the medium of a special kind of association known as "comptoirs," which we shall describe later. The results of this law were, however, disappointing. A few "comptoirs" were formed, but very little use was made of the credit facilities which the law provided.

SECTION 1.—*The rural banks.*

It was generally felt, therefore, that a better system of agricultural credit was required, and the Abbe Mellaerts set himself to adapt the Raiffeisen system to local circumstances and to the requirements of the Belgian laws. As the law stood, the rural banks were obliged to take the form of cooperative societies, since it was requisite that they should have the power of admitting new members and of varying the capital, without the legal formalities with

which commercial companies were obliged to comply. But, contrary to the strict Raiffeisen principles, the law dealing with cooperative societies did not allow such societies to dispense with foundation capital nor to make their reserve funds indivisible. In order not to depart too far from the Raiffeisen model, the Abbe Mellaerts decided that the shares should be very small (2 francs); that the dividend payable on the shares should not exceed the rate of interest charged on loans; and that there should be two reserve funds—the "real reserve," composed of the share payments and entrance fees, and the "conditional reserve," to which the net profits should be placed. The "real reserve" should serve to pay possible losses, and in the event of the dissolution of the society any sum still standing to this reserve should be distributed amongst the members. The "conditional reserve," on the other hand, should be returned in case of dissolution to the central bank from which the society had borrowed its working capital.

Except for these slight modifications, the rural banks in Belgium follow closely the Raiffeisen system.

Notwithstanding the difficulties and prejudices which had to be overcome, the rural banks spread rapidly over the country. The first was formed by the Abbe Mellaerts at Rillaer in 1892 and in 18 years no less than 643 banks were established.

The following figures relate to the year 1909:

Number of banks furnishing information		458
Membership		25,762
Paid-up share capital	francs	72,071
Loans granted in 1909	do	[1] 4,162,911
Loans outstanding on Dec. 31, 1909	do	[2] 10,936,597
Deposits received in 1909	do	9,742,693
Total working capital, including deposits in hand, Dec. 31, 1909	francs	22,020,786
Reserve fund	do	440,707

SECTION 2.—*The central banks.*

All the rural banks in Belgium are affiliated to regional central banks, which are cooperative societies with limited liability. Only recognized local banks and the persons who are intrusted with the management can become members of the central banks. The latter are nominated by the general meetings.

Each member subscribes for one share of the value of 100 francs, and is liable up to the amount of 1,000 francs. The dividend on the shares is fixed at 3 per cent, and the balance of the profits is carried to the reserve.

The central banks in Belgium, besides accepting deposits from and making loans to local banks, supervise their management and inspect their accounts. They not only make loans directly to the local banks, but guarantee loans made to them by the General Savings Bank, which, in conformity with the law of 1894, set aside a sum of 1,000,000 francs to be lent at 3½ per cent interest to rural banks affiliated to a central bank and guaranteed by it. The General Savings Bank has also agreed to accept on deposit from the central banks at 3 per cent interest the sums which they are not able to employ in lending to the local banks.

Where a central bank guarantees a loan made to a local bank, the General Savings Bank allows it a commission equal to one-twelfth of the interest charged.

There are 7 central banks in Belgium, the most important of which is that of Louvain, known as the "Boerenbond." In 1910 out of the 643 Raiffeisen banks in Belgium 304 were affiliated to the Boerenbond. For several years past the Boerenbond has been practically independent of the assistance of the General Savings Bank, having received sufficient deposits to enable it to grant all the loans applied for by the local banks. In 1910 it granted loans to the total amount of 225,000 francs.

Recently, with the object of extending its utility and to find a safe investment for its capital, the Boerenbond has organized a system of land improvement credit.

SECTION 3.—*The "comptoirs agricoles" and the popular banks.*

As we have already indicated, the rural banks are not the only institutions in Belgium which provide credit facilities for agriculturists, the "comptoirs

[1] $803,262, or £165,055. [2] $2,110,292, or £433,624.

agricoles," formed in virtue of the law of 1884, having the same object. The "comptoirs agricoles" are small corporate bodies, consisting of at least four persons, which guarantee the loans granted to individual farmers by the General Savings Bank, receiving a small fraction of the interest as commission.

From 1884 to 1909 only 16 "comptoirs" were formed in the whole of Belgium. On December 31 of the latter year there were 3,605 loans outstanding guaranteed by the "comptoirs," 684 of which had been granted in 1909. Only 104 of these 684 loans were less than 1,000 francs in amount, so that it is clear that the "comptoirs" serve rather the large farmers than the small holders. The "comptoirs," in fact, do not care to guarantee small loans, as they do not find such business sufficiently remunerative. It is, too, less hazardous to make loans to large farmers who own their land than to small farmers who can not furnish adequate security.

Not the least difficulty in the way of forming "comptoirs" is that of finding men who for such a slender return are willing to undertake the liability of acting as sureties.

Another form of agricultural credit to be met with in Belgium is the popular bank of the Schulze-Delitzsch type. In the whole country, however, there are only two such banks which are mainly concerned with agricultural credit—those of Goe-Limbourg and Argenteau. In 1909 these two banks granted 40 loans of the total value of 50,436 francs.

CHAPTER IX.

COOPERATIVE AGRICULTURAL CREDIT IN GREAT BRITAIN AND IRELAND.

In Great Britain the number of agricultural cooperative credit societies which has been formed is comparatively small, but in Ireland such societies are more numerous.

Cooperative credit was introduced into Ireland by the Irish Agricultural Organization Society, aided by grants from the congested districts board for Ireland and subsequently from the department of agriculture and technical instruction for Ireland.

In England and Wales credit societies were promoted first by the Agricultural Banks Association and afterwards by the Agricultural Organization Society. The latter in recent years has received grants from the board of agriculture and from the development commissioners.

With few exceptions the form of society adopted has borne a close resemblance to the Raiffeisen banks of Germany. The area of operations is limited to a parish or to two or three adjoining parishes. The members are elected by the committee. Loans are only given to members and for reproductive purposes approved by the committee. There are no shares, but the liability of the members is unlimited. Each member pays a small entrance fee.

In some cases "guarantee members" have been admitted, whose liability is limited to a specified sum, but this practice is rare.

A small number of agricultural credit societies in which the liability of the members is limited has been formed in Ireland, but the societies of this kind do not seem likely to increase.

In Ireland the credit societies have obtained working capital from the following sources:

1. Deposits of members.
2. Advances from local landowners or other persons interested in the well-being of the small farmers.
3. Advances from the congested districts board for Ireland and the department of agriculture and technical instruction for Ireland.
4. Loans from the ordinary joint-stock banks.

The last named is now the most important source of capital. Nearly all the large Irish banking companies have recognized that the cooperative credit societies can serve as auxiliaries to them, doing business with a clientele which the large banks can not reach without their intervention. They have, accordingly, consented to advance money to the credit societies at moderate rates of interest.

Proposals have been made for establishing a central bank in Ireland, but the need is not a pressing one.

In England and Wales greater difficulties have been experienced in obtaining working capital. The large banking companies have not recognized the credit societies and no Government department has made advances of money to them.

The Central Cooperative Agricultural Bank (Ltd.) has been formed to assist the societies in finding capital. This is a cooperative society, with limited liability, containing both individual members and society members. Before obtaining advances from the central bank, a credit society must take at least five shares of the value of £1 each. The central bank also receives deposits from societies which have surplus capital not immediately required for lending to members. As yet the transactions of the central bank have been on a very small scale.

The rate of interest charged by credit societies to their members is usually in the neighborhood of 6 per cent. Sometimes they are able to lend at lower rates than this, but in Ireland the Irish Agricultural Organization Society urges the credit societies to charge even more than 6 per cent in order quickly to build up a reserve fund.

The following are the latest available statistics of the agricultural credit societies (1) in Ireland and (2) in England and Wales:

TABLE I.—*Statistics of agricultural cooperative credit societies in Ireland in 1909.*

Number of societies	234
Membership [1]	18,422
Loan capital	£32,780
Deposits	£23,688
Total capital	£56,469
Amount of loans granted [2]	£57,640
Number of loans granted	9,213
Loans outstanding	£55,292
Expenses	£593
Net profit	£554
Reserve fund	£3,559

TABLE II.—*Statistics of agricultural cooperative credit societies in England and Wales in 1910.*

Number of societies [3]	40
Membership	663
Loan capital	£1,028
Deposits	£548
Amount of loans granted	£1,390
Number of loans granted	119
Loans outstanding	£1,421
Expenses	£34
Net profit	£64
Reserve fund	£270

CHAPTER X.

COOPERATIVE AGRICULTURAL CREDIT IN BRITISH INDIA.

In British India the promotion of cooperative credit, both rural and urban, has been undertaken directly by the State. The cooperative credit societies act, passed in 1904, authorized the appointment by the various provincial governments of officials known as registrars of cooperative credit societies, with wide powers for the promotion and supervision of credit societies.

For the "rural" societies, defined as societies in which not less than four-fifths of the members are agriculturists, the broad lines laid down are those of the Raiffeisen system, but considerable latitude is allowed.

Save with the special sanction of the provincial government, the liability of the members of "rural societies" must be unlimited. All profits must be carried to the reserve fund until it has reached a certain proportion of the total liabilities and until the rates of interest on loans have been reduced below a certain percentage.

[1] Twenty-six societies failed to furnish returns of membership.
[2] Forty-eight societies failed to furnish returns of loans granted; these include societies which had either not commenced working or had not yet worked for 12 months (and so had not yet had an annual audit) on Dec. 31, 1909.
[3] Of these societies, 9 either furnished no returns or reported that they had as yet done no business. The remaining figures relate to 31 societies.

In practice the great majority of the rural societies are societies with unlimited liability, but some societies with limited liability have been formed. Even where the liability is unlimited members are usually required to take shares, besides paying an entrance fee. Loans are almost always for reproductive purposes, but loans for other purposes are occasionally allowed.

The progress made since the passing of the act of 1904 has been rapid. On June 30, 1910, there were in India 3,145 rural societies, 321 urban societies, and 32 "central" societies.

The so-called central societies, of which the object is to provide capital for the local societies (rural and urban), show great diversity of character. In some cases they are strictly Federal, consisting solely of affiliated local societies. In such central societies the liability of the society members is usually limited to a certain multiple of the shares which they have taken up in the central society. A type of central society also exists, in which the liability of the society members is unlimited.

Other central societies contain both indvidual members and affiliated societies, while yet others contain only individual members.

The following tables contain the principal statistics for 1909–10 of the rural and central societies:

TABLE I.—*Number, membership, loans granted, etc., 1909–10.*

	Rural societies.	Central societies.
Names of societies at end of the year	3,145	32
Membership at end of the year	165,560	3,740
	Rupees.[1]	*Rupees.*
Amount of loans granted to members during the year	[2] 5,434,457	190,902
Amount of loans granted to other societies during the year	201,606	1,469,750
Amount of loans to members outstanding at end of the year	5,991,865	295,601
Amount of loans to other societies outstanding at end of the year	170,106	1,973,422
Net profit during the year	274,368	52,939

[1] A rupee is equivalent to 0.324 dollar, or 0.066 pound sterling. [2] $1,761,676, or £362,297.

TABLE II.—*Sources of capital, June 30, 1910.*

	Rural societies.	Central societies.
	Rupees.	*Rupees.*
Loans from nonmembers	1,052,697	889,226
Loans from other societies	2,787,798	85,795
Loans from Government	506,194	60,374
Share capital	923,677	445,448
Deposits by members	977,236	829,892
Reserve fund	205,446	11,373

The latter table is interesting as showing to what a large extent the societies have become independent of advances from Government in finding the necessary working capital. It will be remarked that for the rural societies the principal source of capital is "other societies"—that is, not only central societies, but urban societies and other rural societies. The money provided by the members themselves in shares or in deposits also forms a considerable percentage of the working capital, and the societies have been able to obtain money largely from the general public.

In the case of the central societies, it is not possible to distinguish between the capital provided (as shares or as deposits) by individual members and society members, but a large proportion of the capital is provided by the two classes of members together, and another large portion is obtained from the general public. The amount which the central societies have obtained from the Government is comparatively trifling.

Thus, while the initiative in forming societies has been taken by the Government, the societies are very far from being dependent upon the Government for the working capital which they require.

CONCLUSION.

In the foregoing chapters we have seen that in different countries and in different circumstances cooperative agricultural credit has developed along different lines.

In no respect are the differences more remarkable than in the source of the capital. In Germany the Landschaften obtain the capital they require from the investing public by the issue of bonds. The Raiffeisen banks, too, are almost independent of advances from the State: they find nearly all their working capital in the deposits of members and others and in the loans which they obtain from their central banks and from other banking institutions. In France, on the other hand, it is the State which finds the bulk of the capital for the cooperative banks.

Great variations, too, may be remarked in the liability of the members. While the principle of mutual responsibility is always carried out to a greater or less extent, the liability of the members ranges from the unlimited liability of pure Raiffeisenism to a liability limited to the nominal value of the shares. It seems, however, that unlimited liability, or a near approach thereto, is found by experience to be the soundest basis of cooperative credit, especially where the borrowers are small cultivators.

Again, the methods of granting loans and the security demanded vary greatly. The effort to reduce risk of loss is everywhere apparent, but there is a tendency to relax precautions which prevent the system from being elastic. This can, it is clear, be most safely done when the uses of credit are better understood. Where stop-gap borrowing has been prevalent, for instance, credit societies must naturally insist upon the borrower binding himself to apply his loan to a reproductive purpose. In time, however, the credit societies themselves so far educate their members that they only borrow money for investment as capital in their business, and more elastic forms of loan, such as loans on current account, become more usual.

In introducing cooperative credit into any country or agricultural district where it has not been previously practiced it is necessary to take the social and economic conditions into account. It must be inquired: Who are the persons for whom the credit facilities are intended? Are they large farmers or small cultivators? Are they proprietors of the lands they cultivate or only tenants? Are they all approximately upon the same social and financial level, or are there wide differences between them? Do they require the loans for long periods for making permanent improvements or for short periods for use as working capital? Are they accustomed to borrowing for reproductive purposes or have they borrowed chiefly for stop-gap purposes? Are they already heavily indebted?

Upon the answers to these questions will depend, to a large extent, the form of cooperative credit to be adopted. The most important consideration is whether the capital is required by landowners for improving their property or by farmers to carry on the ordinary operations of cultivation. In the former case the German Landschaften furnish a model which should not be difficult to adapt to the circumstances of any other country. In the latter case the Raiffeisen system or some modification of it is generally the best, but in advanced economic conditions a modification of the less paternal Schulze-Delitzsch system might perhaps be adopted with advantage.

It is also important to inquire whether the persons for whom it is desired to provide credit facilities are approximately on the same social and financial level, or if there are wide differences between them. It can not be expected, for example, that large farmers will generally be willing to join with small farmers in a society where the liability of the members is unlimited. Where there are great differences of financial status, some limitation of the liability must be adopted in order that it may not press too heavily upon the more well-to-do members.

To attract deposits, the best and most elastic source of capital, a credit society must be founded on a basis which will inspire public confidence and make the risk of a general withdrawal of deposits almost negligible. In large societies it may be possible to keep a considerable proportion of liquid assets, but, speaking generally, the funds of a credit society must, for the most part, be employed in making loans to members on terms which do not admit of their being readily realized. Where credit societies are numerous and are combined together to form central banks a greater elasticity is obtained in this respect.

The security which suffices to attract deposits usually suffices also to enable a credit society to obtain advances from banking institutions or capitalists. In availing itself of this source of working capital, a credit society must so conduct its business as to be able to repay the money when it becomes due. It can not, for instance, borrow money for one year and lend it out for two. This, however, is a question of common sense in doing business which does not affect the form of organization.

We conclude this brief study of agricultural cooperative credit with the warning that the systems which we have described have been devised with the object of bringing credit facilities, such as exist in advanced commercial communities, within the reach of persons who individually were not able to obtain them. It is not to be supposed that the adoption of any such system will appreciably diminish the rate of interest at which a person can borrow money who can offer substantial security and has direct access to banks or capitalists.

JULY 15, 1912.

Hon. JOHN LAMB,

Chairman Committee on Agriculture, House of Representatives.

SIR: I have the honor to acknowledge the receipt of your letter of the 9th instant and the pleasure, in compliance with the request contained therein, to inclose herewith for the information of your committee a copy of the instructions issued by the department to Ambassador Herrick concerning land-credit facilities in Europe.

I have the honor to be, sir,

Your obedient servant,

P. C. KNOX.

DEPARTMENT OF STATE,
Washington, March 30, 1912.

Hon. MYRON T. HERRICK
(Appointed American ambassador to France, now at Cleveland, Ohio).

SIR: Referring to the conversation which you had with the President on the subject of a plan to encourage the establishment in the United States of arrangements corresponding to those in certain European countries whereby, through associations, farmers are enabled through the issuance of bonds to enjoy, for the purpose of prompt improvement of farming properties and agricultural methods, facilities somewhat similar to those enjoyed by municipalities which can issue bonds, and referring also to your conversation at the department when you were good enough to undertake a special investigation of this subject, in which the President is so greatly interested, the department is to-day issuing instructions to the embassies in Germany and Italy and to the legations in Belgium and the Netherlands to prosecute a similar investigation. These missions are being directed simultaneously to send copies of their reports to the embassy at Paris, which is requested to undertake the duty of preparing a general report, with all proper exhibits and documents, such as will place the department in possession of all data necessary to the President for the formulation of some practical scheme which may be worked out to bring the desired benefits to the agricultural communities of the United States.

If there are any other countries where such arrangements are already in operation, the department will from time to time be glad to supplement the present instructions with further instructions.

I am, sir, your obedient servant,

HUNTINGTON WILSON,
Acting Secretary of State.

PRELIMINARY REPORT ON LAND AND AGRICULTURAL CREDIT IN EUROPE.

INCLUDING THE LETTER OF PRESIDENT WILLIAM H. TAFT TO THE GOVERNORS OF STATES AND THE RECOMMENDATIONS OF AMBASSADOR MYRON T. HERRICK IN CONNECTION WITH THE PROPOSAL OF PRESIDENT TAFT TO INTRODUCE COOPERATIVE CREDIT IN THE UNITED STATES.

[Letter from President William H. Taft to the governors of the States.]

EXECUTIVE OFFICES,
Beverly, Mass., October 11, 1912.

MY DEAR GOVERNOR ———:

For some months past, at my direction, the Department of State, through its diplomatic officers in Europe, has been engaged in an investigation of the agricultural credit systems in operation in certain of the European countries. Although the investigation is still under way, a preliminary report has been submitted, together with the recommendations of Ambassador Myron T. Herrick in connection with my proposal to adopt this system in the United States.

A study of these reports and of the recommendations of Ambassador Herrick, which I am sending you, convinces me of the adaptability to American conditions of the cooperative-credit plan as set forth in the organization of the Raiffeisen banks of Germany. The establishment and conduct of such banks, however, are matters for State control. I suggest, also, the establishment of land-mortgage banks under State charters and the formation of cooperative mortgage-bond societies along the lines of the Landschaften societies of Germany, provided that uniform State legislation can be secured to govern their organization and operation. As a later step I favor the enactment of laws by Congress permitting the organization of national land-mortgage banks, to be operated under strict Government supervision, with the power to guarantee and market the guaranteed debenture bonds of the State land-mortgage banks or cooperative societies. I recommend for your consideration the report and recommendations of Ambassador Herrick, now published by the Department of State for general distribution. This report should receive the attention of everyone interested in the problem of agricultural finance and, indeed, of all persons interested in the welfare of the American farmer.

The need for the establishment of an adequate financial system as an aid to the farmers of this country is now quite generally recognized. The governmental initiative taken by the Department of State under instructions issued by my direction to the diplomatic officers in Europe on March 18 last, have been effectively supplemented by the American Bankers' Association, the Southern Commercial Congress, and by many other bodies by whom this question has been agitated, and valuable work has been done in studying and disseminating knowledge of those great instrumentalities which have been created in foreign lands to extend to their agriculturists credit facilities equal in benefits to those enjoyed by their industrial and commercial organizations. The handicap placed upon the American farmer through the lack of such a system and the loss sustained by the whole citizenship of the Nation because of this failure to assist the farmers to the utmost development of our agricultural resources is readily apparent.

The 12,000,000 of farmers of the United States add each year to the national wealth $8,400,000,000. They are doing this on a borrowed capital of $6.040,-

000,000. On this sum they pay annually interest charges of $510,000,000. Counting commissions and renewal charges, the interest rate paid by the farmer of this country is averaged at 8.5 per cent, as compared to a rate of 4.5 to 3.5 per cent paid by the farmer, for instance, of France or Germany.

Again, the interest rate paid by the American farmer is considerably higher than that paid by our industrial corporations, railroads, or municipalities. Yet I think it will be admitted that the security offered by the farmer in his farm lands is quite as sound as that offered by industrial corporations. Why, then, will not the investor furnish the farmer with money at as advantageous rates as he is willing to supply it to the industrial corporations? Obviously the advantage enjoyed by the industrial corporation lies in the financial machinery at its command, which permits it to place its offer before the investor in a more attractive and more readily negotiable form. The farmer lacks this machinery, and, lacking it, he suffers unreasonably. This is not theory. Through all the changing conditions of a century the soundness and practicability of such financial machinery, based upon the peculiar credit needs of the agriculturist, has been tried out, and so successful has been its operation that in Germany, in times of financial stress, money has been taken out of the commercial field and placed in the keeping of that Empire's agricultural cooperative banks for safety. The value of this assistance to the farmer receive unquestionable testimonial in the growth of the system in the countries of Europe. More specifically this advantage may be seen in the fact that through this machinery the Germany farmer has received money at times at rates lower than those current in commercial loans.

But the advantages to be gained by the adoption of this plan go beyond the direct saving in interest charges to the farmer. The great necessity which prompted the establishment and extension of this plan throughout Europe was that of checking the rapidly advancing increases in the cost of foodstuffs, brought about by the inevitable increase in consumption and the failure of the long-drained soil to afford a corresponding increase in production. That problem faces the people of this country to-day—not in so severe a form as it threatened the older countries of Europe, but still as a great and pressing economic problem.

In Europe this problem has been successfully met, first, by reducing the cost to the farmer of producing his crops and, secondly, by increasing his production through the adoption of improved methods of cultivation. Both the Federal and State governments in this country have done much to afford the farmers instruction in improved agricultural methods, But it still remains for us to reduce the cost of the farmer's production by affording him the necessary capital for the exploitation of his soil upon the most advantageous terms. He must be afforded the money necessary for him to adopt improved methods. It must be made profitable for him to place every acre of his ground under cultivation. This offers the consumer relief from the increasing cost of foodstuffs.

It is this portion of the task that still remains to be performed in this country, and it is in this task that I invite your cooperation.

The country enjoys to-day great prosperity. The factories are busy, the workingmen employed, and everywhere the wheels of industry hum. The farmer shares in this general prosperity. We have come to look upon the farmer of to-day as one of our most prosperous citizens. The proposal which I make is not to subsidize the American farmer. Fortunately for this country he does not need it, nor would he accept it. What this plan offers is a means to secure to this country greater productivity, at less cost, from the farms that are now under cultivation, and, above all, to give us more farms and more farmers. It will make it profitable for the farmer to return to the cultivation of the abandoned farms of the East and to open up the vast areas of untilled land in the West.

All this can be done, and I am convinced that in this country it must be done, by the efforts of the farmer himself. It is natural that some of the European Governments should have extended a paternal protection over the systems of agricultural finance and to have given them financial as well as legal assistance. This, however, must be guarded against in this country. We must establish a credit system of, for, and by the farmers of the United States. It were better, otherwise, not to consider the matter at all. It is an interesting commentary on the value of paternalistic governmental support to note that this plan of agricultural cooperative credit has thrived best—in fact, has enjoyed a substantial development only—in those countries where the movement has grown up

from the farmers and where the Government has to the greatest degree refrained from attempts artificially to nurture the plan by subsidy and has restrained its interference to the proper field of imposing restrictional legislation for the purpose of preventing speculation.

The entire field of agricultural cooperative credit is properly divisible into two parts: First, the cooperative societies of farmers, formed for the purpose of obtaining personal credit; and, secondly, the societies or private corporations formed to create a sound security in land mortgages for the purpose of gaining a national or international market for bonds based upon farm-land mortgages. Both of these forms cooperative credit may be found in many of the European countries under varying forms of organization. The general principles, however, are very much the same.

It is not practicable here to go into the details of the organization followed in European countries in the formation of these cooperative societies. A very good law has been enacted by the State of Massachusetts allowing the incorporation of credit unions, which should furnish an excellent example for other States. Their establishment is generally a matter for State legislation and encouragement, their organization and management are wonderfully simple, and the experience of the European countries shows that their success is practically inevitable where the environment is congenial to their growth and where proper laws are passed for their conduct. Although undoubtedly the organization followed in the European countries could not be adopted in its entirety in this country, I would advocate the general principles followed by the so-called Raiffeisen banks of Germany. These smaller societies should restrict their loans to personal credit. They are not intended to make large loans on land mortgages, although, indirectly, the lands of all the members form the security. Above all, the cardinal principle should be followed that all money loaned should be for a strictly creative purpose. No loan for the purchase of anything merely for consumption should be tolerated.

The business of furnishing money as loans on real estate is the proper province of the cooperative societies or private corporations, which I have placed in the second class. In Germany this is done through cooperative societies known as Landschaften and through mortage banks. In France it is done through the Crédit Foncier.

The chief advantages brought to farmers through such institutions are lower interest rates and easy amortization, whereby the borrowing farmer may repay his loan bit by bit, extending these payments over a long number of years. Thus, his obligations are made proportionate to his annual receipts from the exploitation of his soil, and the danger of foreclosure is vastly reduced. To appreciate what this amortization plan would mean to the farmers of this country, it is only necessary to consider the foreclosure records of some of our States.

It is not my purpose here to lay down any one plan as necessarily the one most suitable for adoption in the United States. From the reports of our ambassadors and ministers in Europe and from the recommendations of Ambassador Herrick, to whom was given the task of compiling from these the general report, I am inclined to suggest the suitability of organizations similar to the German land-mortgage banks for incorporation under State charters in this country. It will be most desirable, if not, indeed, essential, that the laws creating and governing such institutions should be uniform throughout the States, in order that they might be well understood by the investor, and their debentures should be given character both at home and abroad. As a later step it may prove advisable to urge the enactment by Congress of laws permitting the creation of national land-mortgage banks similar to those of Germany and France, with limited privileges, and surrounded and guarded by strict supervision, but with sufficient appeal to American initiative and opportunity, with the power to guarantee and market a guaranteed debenture bond of the State mortgage bank or cooperative society. Securities issued by such national institutions would probably find a ready market in Europe at low rates of interest, since they are a favorite and familiar form of investment in those countries by the conservative investor.

The most essential point to bear in mind is the need for the assumption by the Federal and State Governments of the responsibility for economically and honestly conducted institutions. Such assumption is the essential precedent for obtaining the confidence of the American as well as the European investing public. In this field, as in all others, there is room for harmful exploitation for personal gain. That must be guarded against. Therefore, I invite you to make

this matter the subject of earnest study and exchange of views between the state executives, and I now extend to you, with the governors of the other States, a cordial invitation to confer with me in Washington, on the occasion of the next annual conference of governors, in order to consider means for the adoption of an agricultural credit system as a benefit to the American farmer. I understand that the congress of governors is to occur in December. Were not the interval so short, my conviction of the importance of this subject would impel me to invite you to a special conference at a still earlier date.

Renewing my request for your hearty cooperation in a work of such Nation-wide benefit to the farmer, the consumer, and, indeed, to the Nation at large.

I am, my dear governor, very sincerely yours,

WM. H. TAFT.

purposes, for such security is perishable and subject to loss or change. The long-time loan requires an unchanging and permanent security, and the only thing possessing this quality is mother earth herself. But when capital is once sunk in land it becomes fixed and can never be recovered except from the income created thereby or the amortization sums paid in representation of that income. A debtor should not be called upon to pay back the loan in lump or in advance of his receipts from the land. To do so leads only to further borrowing, usually on more burdensome terms, when the mortgage expires. On the other hand, a private individual can not be expected to take his money back in driblets or wait long years for its complete return. So, private lending on real estate is a theoretical and also a practical wrong. The proof of this lies in vast numbers of foreclosures and the excessive interest rates of farm mortgages in western United States, where they are largely held by persons. The smallness of the annual payments and the length of an ordinary loan in Europe are shown in the tables of the Crédit Foncier, which have been included in this report. A glance at them makes it apparent that amortization, the basic principle of a land loan, can be brought into full play only by the aid of large corporations with charters perpetual or lasting a long time.

An incorporated body has a further advantage over private individuals, provided it gains the confidence of the public and carefully preserves the sinking fund created by the amortization payments. It can issue debentures against the mortgages, sell the same, and so immediately recover the entire capital lent regardless of the length of the loan. This debenture bond by which a land mortgage is made fluid was invented, as has been previously mentioned, by the German Landschaften, or Ritterschaften, as the older type of these associations are called. Nothing like it has been used in America. By rendering amortization possible it brought benefit to debtors. As it runs for long periods—50 to 75 years—synchronously with the loans, and is recallable only by lot or option of the maker, the issuing banks can not be embarrassed by sudden withdrawals of money during panics or at inopportune times, and from the standpoint of the lender it leaves nothing to be desired. If he choose, it may be drawn payable to bearer and sold and transferred by the simple act of delivery, without legal or fiscal systems, thus enabling the holder to regain the whole or any part of his savings practically at will. These bonds have been an almost perfect security for generations. The safeguards thrown around them by law make them a safe and sound investment, open for the poor as well as for the rich, and by their means large sums and petty hoards have been collected from all quarters of the Continent and wisely used for the improvement of land and the development of agriculture. It should be noted that the tendency to centralize is as strong in the land-credit organizations as in the rural cooperative credit systems of Europe. All the nations have either one or only a few banks. In Germany a central bank has been formed by a group of Landschaften and another has been formed for the mortgage banks. The local concerns arrange the loans and send the documents, including the mortgage indorsed, over to the central banks, which issue debentures against them in several languages. They are sold readily in foreign markets.

The time has now arrived for action in the United States. Very little now can be gained by further study of the European field. The investigations which are being carried on through the agencies mentioned in this report have already gathered nearly all the material required concerning the working principles, business methods, and achievements of the farm and land credit systems, and full and complete information will soon be available with all details. The rural mutual-credit societies, as is well known, have been operating successfuly as far back as 1862, and have made the farmers not only their own bankers, but by aiding cooperation in all its branches have also enabled them to become their own merchants, buying supplies at wholesale and selling produce directly in all the nations where they flourish the best. The Landschaften and other mortgage institutions have evolved the true theories of the mortgage loan—never tried in America—and have made real estate securities so safe, convertible, and cosmopolitan that in Europe they sell as readily as government bonds, and thus collect and distribute cheap money for use in the improvement of the soil and development of agriculture, and this has been going on for over 130 years. The models and the proof of their worth are at hand. With slight modifications they could be easily adapted to the agricultural needs of many parts of the United States.

There is practically no limit to the amount of capital that could be advantageously employed for rehabilitating worn-out and abandoned farms, opening

were corruptions rather than improvements of the original idea. The true rural credit society is a small group of farmers—the smaller the better—intimately known to each other and holding themselves liable without limit for their associated obligations. This unlimited liability is the main thing. It compels the exercise of caution in the selection of members and inspires confidence in the public so that loans may be obtained up to the full value of the collective guaranty. In most nations such societies have never lost a cent, while the losses that have occurred in all Europe for the last 30 years are too trivial to be mentioned, so there need be no hesitation in adopting the unlimited-liability plan. After a society is well established it attfacts deposits from members and outsiders. It becomes, in fact, a little loan and savings bank, with funds on hand sufficient for its operations and only rarely is obliged to borrow and put its collective guaranty to the test. It passes from the rôle of a borrower to that of a lender, and as it confines this function solely to its members, who are identical with itself, no profit is sought, interest rates are reduced, and practically no risk is incurred. These societies in Germany are so sound that during panics funds have been withdrawn from commercial banks and deposited with them for safe-keeping, and at times they have had more money than they knew what to do with.

The example of one successful society encouraged the formation of other societies in its neighborhood. In every nation the movement has spread rapidly when once it got fairly started. Two hundred new central societies and 474 local ones were formed in Germany last year. The record of previous years has frequently exceeded this. As they increase in number they become affiliated according to geographical or political divisions, and organize central banks for exchange purposes and to connect them with the general banks. This is the natural way a system is developed. It can not be begun by beginning at the top. The growth must be voluntary, prompted by necessity, and based on the small local units self-managed and making loans to members only. Thus was the great German system evolved, the statistics of which have been cited above. The 12,000,000 farmers of the United States are adding over $8,400,000,000 to the national wealth each year. They are doing this on a borrowed capital of $6,040,000,000, on which $510,000,000 of interest is annually paid. Counting commissions and renewal charges the rate is averaged at 8½ per cent for this country as against 3½ or 4½ per cent for Germany. If the American farmers had a thoroughly organized system of mutual credit societies they would not only save this difference of twenty or twenty-five millions of dollars to themselves individually, but in course of time the entire debt would be transferred to the societies, the interest paid to them, an economic waste stopped, and this stupendous sum restored to agriculture. The assertion is neither fanciful nor extravagant. It is below the actual ratio obtained by a comparison with the German figures.

Too much emphasis can not be laid on the fact that these small credit societies are not organized for making loans on real estate. The deposits and funds received by them are withdrawable on short notice. This privilege must be allowed in order to attract the capital needed. But as loans to members yield interest considerably under the ordinary market rate, the only way they have of paying for the use of this capital is by making quick and numerous turnovers with it. In Germany they have taken long-time mortgages, but the practice is strongly denounced by all students who have investigated into the cause of the remarkable success of the Raiffeisen and Schulze-Delitzche systems as contrary to the theory on which they are founded. Credit is indispensable to every business. It is the means whereby one dollar is made to do the work of fifty dollars, as the saying goes, but its classifications and limitations can not be ignored without danger. A loan to acquire something merely for consumption is not tolerated, no matter what may be the security offered. The loan must be strictly for a creative purpose. This is the first cardinal principle, and so rigorously is it adhered to in Europe that the credit societies invite to their circle only those who are producers of wealth, while the better class of mortgage banks discountenance all borrowing except for the purchase of the improvement of real estate. Another principle is that personal and real credit are inherently and irreconciliably separate and distinct, and each must have specially adapted institutions for carrying on its operations.

The recognition and observance of these principles have done much to prevent thriftless debt among farmers, and are undoubtedly the reasons why the land credit is so thoroughly organized on the European Continent. A loan on chattel or character security should naturally be for a short time and for temporary

and such money as serves as cover for the mortgage bonds. He may only hand over these objects to the bank in conformity with the provisions of the law. He is bound, on the demand of the bank, to hand over the mortgage deeds, as well as the securities and money, and to cooperate in the extinction of the record of such securities in the register, in so far as the remaining mortgages on the register suffice to cover the mortgage bonds or in cases where the bank shall create other securities. Should the bank have to surrender to the borrower the mortgage deed to carry out the operations required by the civil code, the auditor shall hand over the deeds, except in the case where the exceptions described in the civil code exist. When a mortgage is repaid the money shall be handed over to the auditor to be taken care of.

Should the bank temporarily require a mortgage deed the auditor shall hand it over without the bank's being bound to provide other cover. The auditor is authorized to inspect the books and writings of the bank at all times, in so far as they refer to the mortgage bonds and the mortgages recorded in the mortgage register. A mortgage bank is bound to make constant communication to the auditor of the repayment of the capital of the mortgages entered in the register, and all the changes regarding these mortgages which concern the holders of mortgage bonds. Disputes between the auditor and the mortgage bank shall be settled by the inspecting authorities. The auditor may demand from the mortgage bank a sufficient honorarium for his services. The amount of the honorarium agreed upon shall be communicated to the inspecting authorities; failing an agreement the amount shall be settled by the inspecting authorities themselves. Auditors who intentionally do anything to the prejudice of mortgage bondholders shall be punished for betrayal of trust according to the provisions of the criminal code.

Whoever knowingly shall issue for a mortgage bank mortgage bonds above the amount for which they are covered by the mortgages and securities or money in the hands of the auditor shall be punished with a term of imprisonment not exceeding one year and a fine not exceeding $5,000. A similar punishment shall be given to any person who, acting on behalf of a mortgage bank, shall knowingly sell or change a mortgage or other security entered in the register of the bank when the remaining mortgages or securities inscribed on the register do not suffice to cover the mortgage bonds. A similar punishment also shall be given to any person who shall fail to observe the law by not handing over to the auditor money paid in redemption of a mortgage. If there are extenuating circumstances, only a fine may be inflicted. Whoever shall issue for a mortgage bank a mortgage bond which does not bear the certificate provided by law shall be punished by a fine not exceeding $250, or with imprisonment not exceeding three months. Nonobservance of other provisions of the law shall be punished with a fine not exceeding $750.

CONCLUSIONS AND RECOMMENDATIONS.

With this brief account the preliminary report on European land and rural credit facilities is closed. Enough has been told, it is hoped, to show the working principles upon which they are based. No more has been attempted. There are 20 or more nations in continental Europe. They have all been confronted by the problems which worn-out soils and increasing population have finally thrust upon the United States, and each has proceeded to solve these problems after its own fashion and in ways adapted to its peculiar conditions and customs. How well they have succeeded is attested by the general acknowledgment that endurable existence of their teeming millions would not be possible except for the means which have been devised for financing the farmer and landowner. In many nations where the situation was desperate—more desperate than can ever be feared to happen in America—the State intervened, granting enormous subsidies and free use of money for agriculture. In other nations the churches and public-spirited men, endowed with wonderful energies, have directed their disinterested efforts to effect combinations for associated action. But these are subjects for subsequent investigation. The object of this report is to present the plans which were developed by the farmers themselves and rest upon unassisted and independent endeavor for the accomplishment of their purpose.

The nation that furnishes the best examples of this kind is Germany—the birthplace of land and rural credit systems, and where to-day they have reached their fullest and most useful development. As explained above in this report, cooperative credit, real and personal, started in Germany, and as it spread throughout Europe it underwent modifications. But these changes

Mortgage banks shall be subject to Government inspection. This inspection shall be carried out by the inspector in the State in which the bank shall have its head office. The inspection shall extend to the entire business of the bank, and shall continue after the dissolution until completion of the liquidation.

The total amount of mortgage bonds issued shall be secured by mortgages of at least equal value and bearing an equal rate of interest. Such security, as far as mortgages on agricultural property are concerned, shall consist to the extent of at least one-half of the mortgages with amortization, and with a yearly amount of amortization of not less than one-fourth of 1 per cent of the mortgaged properties. The banks may, however, in cases in which mortgages are paid back before they are due, and until the amortization period has run out, make use of the interest as cover. If the bank takes over a property on which it has a mortgage, in order to prevent the loss of the said mortgage, it shall only use this property as cover for mortgage bonds to the extent of one-half the price the bank paid when it purchased said property. If, on account of repayment of mortgages or any other causes, the mortgage bonds are no longer secured, and if the necessary security can not at once be replaced, the bank shall, for the time being, replace the failing mortgage securities by Imperial Government bonds or by those of the Federal State or by cash. Such Government securities shall be valued at 5 per cent below their price on the bourse at the time of purchase.

A mortgage bank shall not issue mortgage bonds for any sum exceeding 15 times the amount of the paid-up capital and the reserve funds which shall have been created solely for the purpose of covering deficits or for the security of the holders of such bonds.

Loans by mortgage banks shall be limited to real estate in Germany. Only first mortgages on such real estate shall be allowed. The amount advanced by a mortgage bank on the security of such property shall not exceed three-fifths of the total value of the property. The authorities may permit loans to be made on agricultural properties to the extent of two-thirds of the value.

The estimated value of the property on which money is lent on mortgage shall not exceed the estimated sale price arrived at after a careful valuation of the property. In the estimation of such value the permanent value of the property and the revenue therefrom shall alone be considered; that is to say, the value which the property should produce when properly managed by its owner. In the case of a valuation having been made by a public official of the State in which a given property lies, the Federal Council may decide that the estimation of value made for the bank for the purpose of a mortgage shall not exceed the valuation made by the official in question. Mortgages on building lots or on uncompleted buildings which produce no revenue shall not be utilized to cover mortgage bonds for more than one-tenth of the total value of the mortgages used as cover for such bonds, and shall not exceed one-half of the total paid-up capital of the bank. Mortgages on real estate which does not yield a permanent income shall also be excluded from those mortgages which may be utilized for securing mortgage bonds.

Each mortgage which serves as cover for the issue of mortgage bonds shall be recorded by the bank in a special register, which shall contain a complete record of each specific operation. In the first month of each calendar half year the auditors shall deliver to the inspecting authorities a certified copy of the mortgages which have been recorded during the preceding half year, which certified copy shall remain in the possession of the inspecting authorities.

Each mortgage bank shall appoint an auditor and an assistant auditor. The appointment shall be made through the bank inspection authorities after consultation with the bank. The inspecting authorities may at any time revoke such appointment. The auditor shall satisfy himself that the necessary cover for the mortgage bonds issued is at all times existent. He shall not, however, concern himself as to whether these securities have really the value given to them, in the event of such properties having been duly approved and certified by the inspecting authorities. The auditor shall further satisfy himself that the mortgages and securities, which are intended to cover the issue of mortgage bonds, have been duly entered in the mortgage register. The auditor shall certify on each mortgage bond, before its issue, that the necessary cover is existent and that it has been duly recorded in the mortgage register. Mortgages or securities recorded in the register shall only be removed therefrom with the consent of the auditor in writing. This may be effected by his indorsement of the mortgage register. The auditor, together with the bank, has the custody of all documents regarding the mortgages and securities recorded in the register

control of the society. It is for this reason that the debentures, although calculated to be redeemed synchronously with the loans they represent, have no fixed time for maturity and are recallable at option. In each issue a certain number are repayable by lots, with prizes for the lucky holders. A bond last year drew a prize of $40,000. The right to give prizes at the lottery drawings is one of the special privileges of the society. The debentures are of two kinds. Those representing the mortgages are called "foncières," and those representing the loans to municipalities and public establishments are called "communales." They are issued in series. The smallest denomination is $20. They may be bought by installments, and are the most popular form of investment in France, being held largely by farmers and poor people in the cities. The issue of 1912 for $100,000,000 at 3 per cent, payable within 70 years, was oversubscribed 18 times. The total land mortgages and municipal indebtedness in France is figured at $2,800,000,000. Nearly one-third of this is represented by the loans of the society.

Such is the Crédit Foncier of France. The control exercised over it by the State, through the appointment of its head officers, the simplified foreclosure proceedings, and the other judicial, administrative, and fiscal privileges accorded to it are common practices in continental Europe. As mentioned above, all the older banks are specially privileged, and consequently have a practical monopoly of the mortgage-bond business in some of the nations.

GERMAN MORTGAGE BANKS.

In view of this fact the mortgage banks of Europe may be classified generally as public or semipublic, and as strictly private institutions. The first have just been described. The latter are all those which, whether they consist of lenders or only of borrowers, operate under general laws and have absolutely no privileges. The state, however, does not leave these companies entirely to their own devices. They are limited in the conduct of their business by strict rules and regulations, and are subject to the most scrutinous supervision. The best law of this kind is that enacted in Germany in 1899. It is the last word in legislation for private joint-stock mortgage banks, and with slight modifications could be easily adapted to the United States, as it was framed to overcome the troubles occasioned by the conflict of authority between the sovereign provinces of which the Empire is composed. Remarkable as it may seem, these companies in Germany have outstripped the old established and specially privileged public banks. They now have $2,618,000,000 loaned out on mortgage, or over five times more than the Landschaften. The capital is $170,563,000, the smallest being $238,000 and the largest $14,000,000. The bonds in circulation amount to $2,548,009,000, with interest at 3½ or 4 per cent per annum, while the average returns on mortgage loans are 4.22 to 4.23 per cent per annum. As 6 per cent and even 14 per cent dividends are yearly declared, the figures again furnish a favorable comparison with the Landschaften and Crédit Foncier. The provincial head, however, selects the president of one of these newer German banks, while the Imperial Government watches over them all. The supervision is carried out by royal commissioners and extends to the minutest detail. These inspecting officials have the right to verify the securities and cash on hand, and demand information regarding every separate transaction. They may also send a representative to general meetings of stockholders and to sittings of boards of directors and take all measures that may seem fit to enforce the proper conduct of business. They also approve the appointment of the auditor and assistant auditor, who are charged in each bank with the duty of seeing that debentures are issued only upon the conditions and within the limits legally prescribed. This German law of 1899 has been so effective in directing the flow of cheap money through these banks for the purchase and improvement of real estate, and furthermore illustrates so clearly the trend of modern European legislation, that a translation of its chief provisions has been made and is given below.

Companies of limited or unlimited liability founded in Germany for the purpose of lending money on real estate and for the issue of bonds on such mortgages, and the institutions known under the name of mortgage banks, require, in order to carry on such business, the consent of the Federal Council. If in the statutes of a mortgage bank it is declared that such bank will only make mortgage loans in the State of the Empire in which it has i s head office, the authorization shall be given by the authorities of the State in question. The consent of the council is also necessary for any change in the statutes of any mortgage bank.

fulfill his duties during his absence on account of illness or other causes. The governor appoints and dismisses all agents of the society and superintends the organization of the service in Paris and elsewhere. He countersigns the debentures and signs the share certificates and all other papers and documents, and must strive to promote the interests of the society in every way. The governor is the head of the board of directors, which is composed of himself, the two subgovernors, the auditors, and 20 to 23 directors. This body possesses the administrative powers of the society and is beholden only to the laws and the general assembly of the stockholders for the proper exercise of the same. The three auditors are the guardians of the society. Their duties are to watch, investigate, and make reports. The only power they have is to call extraordinary general meetings of the shareholders.

The general assembly of the stockholders meets regularly once a year. It consists only of the 200 largest stockholders, of whom 40 make a quorum if they hold one-tenth of the stock of the society. Each member has 1 vote for every 40 shares of stock held but can not cast more than 5 votes in his own name nor more than 10 in his own name or by proxy. He has, however, a right to 1 vote, even though his shares be less than 40 in number. The general assembly receives the report of the governor, and also of the auditors, if any. It elects the director and auditors and decides on all resolutions or proposals for the increase of capital, the amendment of the by-laws and constitution, and generally on all matters not otherwise specifically provided for.

The only places outside of France where the Crédit Foncier can do business are Algiers and Tunis. Under a clause in its charter which allows it, with the sanction of the Government, to enter into projects for improving the soil, developing agriculture, and to extinguish existing debts on real estate, etc., the society has been authorized to finance drainage projects and to advance money on the paper of the Sous-Comptoir des Entrepreneurs, an incorporated association of builders. It may also receive deposits up to $20,000,000, one-fourth of which must be kept in the Government treasury and the balance invested in Government paper, treasury bonds, or high-class bankable commercial notes and securities. In connection with its banking house it has large deposit vaults.

The Crédit Foncier is permitted to take short-term mortgages and does a big business in that line, but the true purpose of its existence and the greatest part of its operations are the granting of long-time loans. These are made on mortgages to individuals and, without mortgage, to municipalities and public establishments. The periods run from 10 to 75 years. The annuities required to be paid for amortizing the loan for the average period used are so small as to appear insignificant. The success achieved by the Crédit Foncier in popularizing the amortization principle for real-estate loans is the chief cause of its great renown. At present its interest rate for mortgage loans is 4.3 per cent per annum, for public establishments 4.1 per cent, and 3.85 per cent for municipalities. The total annuity, including both interest and amortization sum, for a 25-year loan is a little over 6.5 per cent. With this small annual payment the debt is gradually wiped out, and nothing is left to be paid at the end of the term. The longer the term the smaller the annuity and vice versa. The loans now exceed $870,000 000. An amortization table of the society follows:

Annuity of a capital of $100, interest at 4.3 per cent, payable semiannually.

Duration.	Annuities.	Duration.	Annuities.
5 years	$22.440405	45 years	$5.043495
10 years	12.409111	50 years	4.881753
15 years	9.115217	55 years	4.758395
20 years	7.504843	60 years	4.663140
25 years	6.566976	65 years	4.588881
30 years	5.964436	70 years	4.530558
35 years	5.552593	75 years	4.484483
40 years	5.259040		

The Crédit Foncier is obliged to keep the interest and amortization payments in separate accounts, the latter going to create a sinking fund for the retirement of outstanding debentures. As stated above, the amounts of the loans and debentures must balance each other; consequently, as loans are paid up debentures must be paid off. Borrowers have the right to pay in advance, which they frequently exercise, so the proper adjustment of the balance is beyond the

THE CRÉDIT FONCIER OF FRANCE.

This famous institution was formed in 1852 under the law enacted that year for organizing the land credit and improving agricultural credit facilities. It was immediately placed under Government control, given a subsidy, and granted a monopoly for 25 years. The monopoly was not renewed, but all its original special privileges remain, which perhaps accounts for its being the only land bank in France. Its relation with the State is very close, and many of its most important features were taken bodily from the Landschaften. Inasmuch as the institution has been the model for all Europe and is now being widely discussed in the American press, a description at length will be given of it.

The governor and two subgovernors of the Crédit Foncier are appointed for life by the President of the Republic. It is subject to the surveillance of the treasury department of the Government, and three of its directors must be high officers of the department. It may use the Government treasuries for the receipt of its dues and the deposit of its surplus funds and enjoys a reduction in stamp and registration duties.

Its debentures are payable to bearer, and the claim of a third party to them can not be made in court except in case of theft or loss. Trust and public funds may be invested in them. Its mortgages are exempt from the decennial registration and consequent charges required of other mortgages. It has a cheap and speedy method of "purging" the title of real estate in case of disputes. In the event of default the courts can not grant the debtor any delay, and payments due it upon loans can not be garnisheed or attached. It is allowed summary proceedings for attaching mortgage property in case of violation of contracts. If dues are not paid or if the property deteriorates it may attach and sell the property simply upon notice and publication. During attachment proceedings it has a right to all returns from the estate. The sale may be by auction in a civil court or at a notary public's office, if the court permits, and no adverse claim to the proceeds of the sale can be allowed until its claims are fully satisfied.

The regulations under which the Crédit Foncier transacts its business are very strict. The mortgage loans must be first liens. The property must have a clear and unencumbered title and yield a certain and durable income. Loans on theaters, mines, and quarries are not accepted. The amount loaned on any property must not exceed half its value, or one-third the value for vineyards, woods, orchards, and plantations. Factory buildings are estimated without regard to their value for particular purposes. A borrower can not bind himself to pay a greater annuity than the total annual income of the property mortgaged, while on the other hand the society is not allowed to charge borrowers 0.6 per centum over the rate at which it obtains money on its debentures issued at the time of the loans. An excess of only 0.45 per cent is allowed on loans to municipalities. The outstanding loans and debentures issued must exactly correspond in amounts.

After paying a 5 per cent dividend the Crédit Foncier must set aside between 5 and 20 per cent of the balance of the profits each year for the obligatory reserve, and continue to do so as long as the same does not equal one-half of the capital stock. The investment of this reserve is left to the board of directors. The capital stock of the society must be always maintained at the ratio of one-twentieth or more of the debentures in circulation and is the primary guaranty of its obligations, especially the debentures. The capital at present is $40,000,000, divided into 400,000 shares of $100 each; but authority has been obtained to increase the same to $50,000,000, represented by 500,000 shares, which will be done before the debentures in circulation pass the legal limit. One-fourth of the capital must be invested in French rentes or other treasury bonds; one-fourth in office buildings of the society, or by loans to French colonies, or in securities deposited with the Bank of France as a guaranty for advances. Shares can not be issued at a price below par. They are nonassessable. The surplus may be loaned on mortgages or to municipalities, or may be used in other mortgage business allowed by the statutes and for buying its own debentures, making advances to borrowers in arrears, or purchasing mortgaged property in foreclosure and for acquiring commercial paper acceptable by the Bank of France or securities to be deposited with that bank.

The governor of the Crédit Foncier must be the owner of at least 200 shares of stock of the society. He receives a salary of $8,000. The subgovernors must hold 100 shares each. Their salaries are $4,000. They perform such functions as are delegated to them by the governor, and in order of their nomination

value is allowable as a loan. The interest paid by the borrower on the loans is that paid by the bank on the debentures, the bank being merely an intermediary between the borrower and the actual lending public. But where the bank pays the loan in cash it charges such interest as it thinks proper, in order to make up any loss should the debentures sell below par. Loans are repayable almost entirely by amortization, usually in about 53 years. Some short-term loans are granted with corresponding debentures. The bank can not demand repayment of a loan except in case of waste, deterioration, or the like. On the other hand, the borrower is at liberty to repay in whole or in part whenever he pleases, but must pay the entire interest for the half year in which he repays. The loan is repaid by an annuity consisting of the interest, sinking fund (usually beginning at one-half of 1 per cent), with a contribution to the reserve or guaranty fund, and another for the expenses of administration. The annuities have totaled 6 per cent, but they now average around 4 per cent or lower—e. g., interest being 3 per cent, sinking fund one-half of 1 per cent, guaranty fund one-fourth of 1 per cent, and expenses one-fourth of 1 per cent. Some of the banks also require a lump payment on the grant of the loan of 1 or 2 per cent to be credited either to the working or to the guaranty fund. The working fund is formed by the contribution made for the expenses of management and any special sources.

Hungary is the only nation outside of Germany that has a true Landschaft of the original type. But modified forms exist in Russia, Austria, Switzerland, Denmark, and Roumania, where they have been useful in supplying agriculture with cheap capital. There is no older principle in land credit than the Landschaften idea. It has been tested and proved by over 130 years of success, and could undoubtedly be employed to advantage by water users' associations in the irrigated regions of the West and in other parts of the United States where landowners might unite to raise funds for drainage or other improvements for their common good. Some of the banks of Switzerland and the credit associations of Denmark, with the laws governing them, perhaps furnish the best models, as appears from the reports of the American ministers to those countries that have been forwarded to the Secretary of State.

The most noticeable fact revealed by the investigation of the European land-credit institution is the all-pervading presence of the State in every Nation. Most of the older joint-stock corporations have a public character equal to that of the German Landschaften. Every one that dates back to 1850 to 1860 was directly organized by the State or brought into existence by a Government fiat or favoring legislation, subsidized in some way or other, and granted special privileges. The supervision now exercised over them all is most stringent, going into the minutest details and varying from direct control to surveillance by State officials, usually by special laws that impose heavy penalties for malfeasance or even neglect of regulations. Continental Europe is accustomed to State intervention. Commercial credit was organized by means of central banks connected with the Government, and so this régime was naturally followed in organizing the land credit. For this reason the results obtained, at least in some instances, can not be used by way of comparison to illustrate the possibilities of organization along the lines of private and independent endeavor.

But whatever may be the opinion entertained for the State intervention in the land-credit system of the Continent, there can be no doubt that the working principles and business methods of the European land-mortgage banks are the best ever devised, and that they will have to be introduced into the United States if it be hoped to make the farm mortgage a fluid and popular form of investment and direct a flow of capital in sufficient volume to agriculture to enable it to keep pace with the progress of the Nation. The main features of this system are the limitation of the interest rate that can be charged, the amortization of the debt, and wise and equitable regulations and restrictions relative to loans and the issuance of debentures which protect the farmer from extortion and thriftless borrowing, and at the same time bring safety and a feeling of confidence to the investing public. These features, with modifications and additions, appear in all European land banks, whether they be semi-public, as they are in France, Spain, and Russia, or of a private character, as with some cases in Germany, or of the mixed type of Switzerland and Italy, but are best exemplified in the great Crédit Foncier of France—the largest and most successful land bank in the world.

ful study. A description of these latter institutions, taken from the excellent report of Sir F. A. Nicholson to the Madras Presidency of India, follows:

THE NEW LANDSCHAFTEN.

These new institutions are of different patterns. Several are annexes to the older societies, but most are independent and resemble ordinary mortgage banks, except in the essential point that they have no share capital earning dividends They are, as the old societies, simply syndicates of borrowers formed to supply proprietors with capital on the lowest possible terms and repayable in the easiest manner. They are gratuitous intermediaries between the outside capitalists and the borrowers, and while performing services of the highest importance in testing the security offered by the borrowers, and in guaranteeing to the public the safety of the capital lent by them, they charge absolutely nothing for their services beyond a small commission, perhaps one-fourth of 1 per cent or even one-tenth of 1 per cent, to cover actual expenses. It is usual for each association to be restricted to a particular area of operations within which every proprietor, whether noble or peasant, may obtain a loan if he can offer sufficient security. There is always a minimum limit either to loans or to the value of property on which loans will be given. This is usually low. In the new Bradenburg Landschaft, affiliated to the old Kur-und-Neumark Landschaft, loans may be granted on property having a net income of only $25. The minimum limit is seldom even approached.

Members are those who borrow from the bank. They are generally responsible in all their property, not merely for their own borrowings but for the debts of the society to the outside public. But in some cases only the property pledged to the society is responsible; in others they are bound, in case of need, to pay a sum proportionate to the amount of their own borrowing. There are no shares to be paid up except in two societies. These two resemble cooperative societies, for the shares are personal and nontransferable, are of unlimited numbr, varying with the number of members, and their value is claimable by a withdrawing member. The share seems to be demanded simply to provide a first working capital and the nucleus of a reserve. The amount of the share is frequently a certain percentage of the amount of the loan required. Some societies demand an entrance fee of a few cents, which goes to the reserve. This reserve will be dealt with below.

The societies in general, having no share capital, do not lend their own funds. The candidate for a loan asks that debentures may be issued against a mortgage of his property. This is then examined. If the security is approved, the candidate executes a mortgage deed to the society, which thereupon issues debentures which are placed on the market and, being sold, provide the funds for the loan. In the old banks the debentures are simply handed to the borrower, who sells them for himself. In the new land banks either this is done or the bank sells them and pays the borrower the value if below par, or if they sell above par then the face value, the surplus going to the reserve; or they simply issue debentures on the market and pay the borrower the amount of the loan as settled. It will be seen, then, that the banks have no capital and no need for it.

The debentures are for the usual class, secured not by the particular mortgage on which they are issued but by the whole mass of mortgages held by the bank and by all its proper forms of security, viz, the property of the members, the reserve or guaranty fund, and even the sinking funds. In some banks a debenture holder has the right (never needed, however) of requiring a court to assign a particular mortgage against his debenture as a specific security in case the bank should fail to pay his interest or capital due. A debenture holder can not demand payment of his debenture, except when it is drawn for payment. But the bank can call in any at six months' notice, besides withdrawing them by lot in the usual way. These debentures enjoy an excellent position, the 4 per cents selling usually at or above par. Since cheapness of loans is the sole object of the bank, it is customary to call in debentures selling at a premium and issue a fresh series at a lower rate.

Loans are usually applied for to the district committee which each bank has, with a statement of the property, the amount required, and all documents necessary to prove title and freedom from encumbrance. Properties may be valued by a special valuation, or a multiple of the net income, as assessed to the land tax, may be taken. In both cases, however, an inspection of the property is necessary unless under a special rule. Half to two-thirds of the estimated

Originally a Landschaft did not give cash to a member in exchange for his mortgage. It gave him a bond which simply contained a promise to pay in the event the interest and principal could not be collected from the debtor. The bond was of the exact size of the mortgage, primarily secured by it, and made payable to bearer on a few months' notice. In case of default the holder had to resort to foreclosure proceedings, so the bonds had only a limited circulation, and were often sold below par. This was but a slight advance on private money lending. Later the associations undertook to collect the interest and principal. Finally they assumed direct responsibility, and began to give cash to members for their mortgages, raising funds for this purpose by issuing and selling bonds of even denominations for large and small amounts. The practice of requiring mortgages to be paid in lump was abolished, and in place thereof the loans were made repayable by annual installments running through a long period of years, and the installments were set aside for redeeming the bonds. These steps brought about a complete revolution in land credit and marked the beginning of the land-mortgage business as it is known to-day. The whole theory of the organization of land credit is based upon this debenture bond and system of amortization and sinking funds devised and introduced by the Landschaften. One without the other two is useless. The three must be combined, and also coupled with strong management under wise laws in order to attract a steady flow of cheap money to agriculture. It is remarkable that this truth has never been realized or applied to the United States for farm-mortgage loans. In spite of the example of practically every nation in Europe for generations, the lending of money on mortgage in America still remains largely a mere brokerage business unrestricted by proper governing laws, either by individuals or corporations, while mortgages continue to be drawn up for three or five years, when experience shows that the average life of a loan is far in excess of that period and needs to be renewed time and again, with added expense to the debtor and trouble for the creditor. Had the European amortization system been employed the companies dealing in western farm mortgages between 1890 and 1894 probably would have escaped the misfortunes that brought them down to ruin.

Amortization is simply a method of paying off a loan by returning a little of the capital each year. These payments are called annuities and are composed of the interest and contributions to the sinking fund and the cost of conducting business. They are calculated for periods of 10 to 75 years, and at the end of the period the mortgaged debt becomes extinguished and the property returns to the owner free and clear of all encumbrances. The prevailing interest rate on amortizable mortgages in France at present is 4.3 per cent. But by adding a little over 3.2 per cent to this and paying 7.5 per cent a year a French farmer can extinguish his debt within 20 years and obtain a satisfaction piece in full from his creditor. Thus, suppose he borrowed $10,000. He pays $430 for interest and $320 for the sinking fund and expenses, or $750 annually 20 times. This makes a total of $15,000, interest included, and his debt is paid off. A farmer in the Southwestern States would pay this much for interest alone and his debt would still be unsatisfied. Amortization has a twofold value. It lessens the debtor's burden year by year and increases in an equal ratio the security of the lender, provided, of course, the sinking fund created by the accumulated annuities be properly and honestly kept for the redemption of the debentures. The Landschaften were very particular in this respect. Hence, their debentures obtained the confidence of the public, and through their means they were able to draw capital from all parts of the country for distribution among their members at the lowest rates on record. If a holder of a bond wished his money back he had merely to sell his bond in the open market. In this way fluidity was given to real-estate securities for the first time in history and the dream of "mobilizing the soil" accomplished at last. For these reasons the Landschaften hold the most prominent place in the literature on land credit, and everybody who studies that subject must begin with them.

The old Landschaften, however, have many characteristics peculiar to their own localities and dates of their foundation. They are in fact governmental institutions, and their head officers are public functionaries clothed with summary executive and judiciary powers over the property, and, to some extent, over the actions of their associate members. These powers were simply an enlargement of the fuedal and manorial rights possessed by princes in early times, and so, in many respects, are contrary to modern ideas. But the new Landschaften, which have adopted the best principles, present points worthy of care-

be a matter for State legislation and encouragement, just as Massachusetts has pointed out the way. After the societies have been thoroughly tried and tested and become a real part of the banking systems of the country, an equitable portion of the millions of dollars pouring into the postal savings banks might be loaned to or deposited with them, thus putting these funds to safe and productive uses, and solving at the same time a vexatious problem now facing the Federal Government. But we can not be too emphatic in cautioning against hasty action. In Germany and Italy, where the best models may be found, success has been attained by slow growth and toilsome labor upon carefully worked out plans.

The rural cooperative credit associations are, as we have shown, local mutual societies for encouraging thrift and granting loans for small amounts and temporary purposes on what may be called "character" security. The Raiffeisen banks have over $45,000,000 loaned out on mortgage, but the chief business by far is loans on current account for short, fixed periods, running with renewals no longer than from harvest to harvest and secured by the guaranty of two associate members. The societies obtain money for their purposes by the deposits of members and nonmembers, and in the Schulze-Delitzsche banks by share capital also; but lending is strictly confined to members. The size of the average deposit is around $370, the average loan $150, and membership 95 persons. These are figures for the German banks. In other nations the averages are smaller. The farmer in Europe, when obliged to mortgage his farm, does not go to this credit society. This should be kept in mind. Real estate credit is usually obtained from the life insurance companies or the savings banks, as in America, or from the land-mortgage banks.

THE OLD LANDSCHAFTEN.

The land-mortgage banks are either joint-stock corporations or societies of borrowers. These latter are typified by the well-known German Landschaften, and are the originals of all land banks. Before them the private money lender reigned supreme. The organization of land credit in fact began with them. They undoubtedly also suggested the cooperative idea to Herr Schulze because five, with nearly $60,000,000 of mortgage loans, were in existence in 1848, when he was trying to start his personal-credit society at Delitzsche. These peculiar institutions are associations of landowners, and have no shares and pay no dividends, the profits, if any, going to reduce the loans; and since they and their borrowers are identical, and managerial services gratuitous, they have been able to lend money at lower rates than any other kind of companies.

The establishment of the old Landschaften was the outcome of the indebtedness and distress of the nobility, and their membership in Germany is still composed mainly of that class and large landed proprietors. After the Seven Years' War the nobles, who owned nearly all the land, lacked the working capital necessary to repair and cultivate their damaged estates, and so were unable to pay their creditors. Frederick the Great ordered the suspension of interest on all estate debts for three years. The period was subsequently extended. The result was the withdrawal of the money lenders from agriculture, the rise of interest to ruinous rates, and a financial stringency that involved the public welfare. In order to relieve the situation this autocratic King decided to adopt plans that had been submitted by Herr Bühring, a Berlin business man. Accordingly in 1769, by a royal fiat, he forced the nobles of Silesia to join an association whether they wished to borrow or not, and their lands were made jointly liable without limit for all loans granted by the association. Loans were granted only upon the consent of the directorate elected by the members themselves. Great care was naturally exercised, so no losses occurred, while immense credit came to the association.

This was the first Landschaft. Others were formed in the same fashion. Nine more were formed by the Provinces and one voluntarily. Then two companies were organized on the cooperative principle, so that there are now 25 Landschaften. The mortgages held by them, all on farm lands, exceed $500,000,000, and the interest rate runs as low as 4 per cent and 3.5 per cent per annum. The bonds by which the money for these loans were obtained are secured by the mass of underlying mortgages and general assets of the issuing association, and ultimately by the unlimited liability of all its members. The collective guaranty and the fact that loans are made only to members constitute the characterizing features of a true Landschaften; but there is a growing tendency to limit this liability and substitute reserves in place of it.

The cooperative idea for personal credit was originated in Germany by Francis Frederick Schulze, a little before the middle of the nineteenth century. It passed over into Austria and Hungary in 1851, into Italy in 1860, into Belgium in 1864, into France in 1883, into Scotland in 1889, and into Ireland in 1894. These dates are given to show the order of advance and the recentness of the movement in some parts of Europe. The first German association was formed in 1849 by Frederick William Raiffeisen. Herr Schulze did not get his started until the following year.

Herr Raiffeisen was poorly educated, but deeply imbued with religious feelings. He lived among peasants in a sparsely settled and impoverished locality, and his object was to help the lowest classes. The associations which grew up under his guiding hand were mutual societies confined to small farming districts. The thought of profit was discarded, and they were managed by the gratuitous services of their members. Herr Schulze was a talented writer and speaker, and when he took up his life work was holding a judicial post in his native town of Delitzsche. His philanthropy, although intense, leaned to the practical side. He believed in paid services and fair returns for money. The associations formed under his leadership were located mainly in towns. They were managed by salaried officers, and membership was dependent upon the purchase of shares, on which dividends were allowed. But both kinds were founded upon the fundamental principle of combining persons together and using the credit created by their united guaranty for providing funds for members who might wish to borrow.

In the early days the mutual credit associations were formed simply by articles of agreement in the nature of a partnership contract, and members were jointly and severally liable without limit for all the loans that were made. In course of time, when the Government began to take official recognition of the associations, some of the followers of Schulze favored a limit to this liability. Hence the mark of distinction became clearly defined between "Raiffeisenism" and the "Schulze-Delitzsche" propaganda. The German law, as it now stands, requires mutual banks to have share capital, but allows them to be organized upon the limited or unlimited liability plan. All true Raiffeisen banks, in order to preserve their character, have shares of only a nominal value and devote dividends to educational or charitable purposes. In Germany these local banks are grouped under central banks, which in turn are linked together by two general central banks, and their funds are made to move freely for agriculture throughout the Empire. The centralization of the system has also been inaugurated in France.

This brief description is sufficient for the purpose of this report, and no further particulars need be given. Full and detailed information of all the various European associations and systems has been printed by the Government at Washington, and is now available for the public. The documents printed for free distribution include translated bulletins of the International Institute of Agriculture at Rome, the historical sketch compiled by Mr. Edwards I. Peters for the Department of Agriculture in 1894, and the findings and comments of the American ambassadors and ministers in Europe which have been forwarded to the State Department during the past five months.

The cooperative credit associations have been of incalculable value to agriculture in Europe. There is no question on this point, and the investigation so far conducted shows quite as conclusively that such societies could be of great benefit to farmers in many parts of the United States. The mutuality of the organization is not an untried idea in America. The mutual life insurance companies, fraternal aid societies, and building and loan associations have prospered. Four-fifths of the savings of the people are to-day deposited in mutual savings banks; and these institutions are organized for encouraging thrift and industry and for handling small sums, as is the case with a credit society in Europe. But their operations are largely confined to cities and towns. This is also true of the savings banks in European nations. The only system yet devised to give ample banking facilities to farmers and afford them personal credit for short-time loans seems to be that of local societies grouped together under central banks, managed by the farmers themselves and exclusively devoted to their particular uses. In 1903 there were 16,106 credit associations in Germany; 14,084 were in the country, and over one-third of the members of the remaining 2,022 belonged to the agricultural class. This ratio prevails in all other nations, and proves the peculiar adaptability of the mutual-credit idea for the use of farmers. The establishment of the societies in America would

"To go on to the next point—that is, to assistance with money—the essence of cooperation, its absolute sine qua non, is self-reliance. A cooperative society is not to be simply a station for the distribution of enduring or else ephemeral public largess. It is to be a body rooted in the soil, possessing sufficient stamina to endure, grow, and, as Mr. Gladstone called it, 'make men.' The same clear-sighted statesman insisted, when our industrial and provident societies act was before Parliament as a bill, that in consideration of the particular object in view, the Government might well remit taxation in favor of cooperative societies, but that it should not on any consideration support them with gifts of money. However, foreign governments open the taxpayers' purse freely, and thereby positively train their supposed protégés away from self-reliance. State aid so applied does grievous mischief, in the first place, because it teaches so-called cooperators to look to the supply of money rather than to the creation of security, which is once more, and in a far more dangerous sense, to put the cart before the horse; for security will at all times command money. In looking for such supply of money, in the next place, State aid thus falsely applied teaches people to rely upon others and not upon themselves. Under the sway of such false principle they can not be expected to want to make an effort. We see the result everywhere. In France they will not undertake any liability. In Italy they even refuse to form societies. In Germany members will not either raise share capital or collect deposits so long as State aid lasts. They go on piling liability upon liability till the foundation almost gives way. And can you make sure that under such circumstances they will repay what they borrow? To a State-aided society debt becomes a natural condition of existence. Take State aid away, or, more correctly, provide a motive for getting rid of it, and effort becomes apparent at once. Money is collected; debt is paid off. Without effort and self-reliance there can be no cooperation."

The state intervention that has marred so many European systems was the outcome of conditions that have never been paralleled in the United States; and in considering this point the paternal care which princes formerly exercised in their domains should not be overlooked. The peasant was released from serfdom in Germany in 1807 and in Russia in 1861, and in other nations at intervals between these dates. His release did not bring him complete freedom. It was not until the feudal system and all manorial rights were abolished and grievous servitudes and dues commuted to fixed charges that the peasant became a full-fledged citizen, capable of acquiring title to land. This finally came to pass in Germany as late as 1848. He emerged from his bondage benumbed in mind and sensibilities by ages of oppression, unambitious, ignorant, and lacking the power of initiative. He spun and wove his own flax, as his ancestors had done; made his own clothes and household utensils; built his thatched house with the aid of neighbors; and raised whatever he ate. If, perchance, anything had to be purchased, it was paid for with farm products. Even taxes were paid in this way. He had no credit and very little need for it. So he lived with all his kind.

This Arcadian existence was rudely disturbed by the rise of modern industry. Gradually the old fashions of life in the country disappeared. More taxes were levied. The growing cities required more foodstuffs, and the peasants who were equipped and trained only for local demand began to produce for the open market. This meant commerce, with business knowledge, banking facilities, and money, but of these they had none. On account of their abject ignorance and poverty they were at the mercy of the money lenders and middlemen, and became the victims of the most grasping forms of usury. Their plight was rendered desperate when improved methods of transportation and the great steamships brought to the European shores the cheap grains from over seas. Innumerable plans and efforts were made to remedy the situation. Some of them got on the statute books, and naturally a strong trace of them remains. Over 200 different projects were submitted to the National Assembly of France around 1852 for improving rural credit facilities. But the solution of the problem was not brought about by governmental action. The mutual banks that began to spread over Europe in the sixties of the past century and which finally brought credit in abundance to the farmers were the results of the life work of two active philanthropists whose theories were antagonistic to State aid, and based on the idea of self-help alone. The achievements of these men may be truly ranked among the greatest romances of finance. As their names are still used to designate the two principal types of banks the important facts of their lives should be known.

mittee, which passes on all loans, may rigidly exclude thriftless and improvident borrowing.

"Fourth. As loans are made only to members, and as any member may become a borrower, care must be taken to admit to membership only men and women of honesty and industry.

"Fifth. As personal knowledge of the character of the members is essential, the membership in an association must be restricted to citizens of a small community, or of a small subdivision of a large city, or to a small group or organization of individuals.

"Sixth. Every provision must be made to bring the association within the reach of the humblest citizen. The par value of the shares should be small (it averages about $5), and they should be payable in very small installments. Loans of very small amounts should be made, and should be repayable by installments if desired.

"Seventh. In making loans it should be recognized that character and industry are the basis of credit, and a loan may be made to a member who has not adequate security to pledge for it, provided he can obtain the guaranty of one or more other members, but no member is obliged to guarantee the loan of another member unless he desires to do so.

"Eighth. Borrowers must carry out to the letter the conditions of repayment agreed upon at the time their loans are made. Prompt payment of obligations is a fundamental requirement of these associations."

It should not be inferred from the great success and good accomplished that the cooperative credit associations could be taken as models in their entirety, or that the establishment of such societies would act as an immediate panacea for all the troubles that beset agriculture in America. They seem to be adapted only for localities where the population is fixed and settled and welded together in close relation by community of interests. In Austria, Germany, Finland, Ireland, France, Russia, the Balkan States, and practically everywhere, the State has in some way or other given aid to these banks. A very general practice is the distribution of subsidies through State-endowed central banks at rates that allow the peasants to obtain money below the ordinary market figures. It is not conceivable that American farmers would accept such assistance from the Government and thus become a privileged class supported in part by the rest of the people. The State-aid program in Europe has made its way against the opposition of the true exponents of cooperation, because it violates the cardinal principle of self-help upon which the idea is founded. Mr. Henry W. Wolff, the best English authority on the subject, writes as follows:

"No doubt a government may, by exerting its authority or temptingly chinking its gold in the ears of necessitous people, bring about the formation of a large number of credit societies. Now, unquestionably the formation of a considerable number of societies must appear in itself a desirable object. However, there is an object even more desirable still, and that is that the societies formed should be sound societies and qualified to stand by their own strength and endure. Government propaganda does not provide for this, because it can not discriminate, because it does not leave it to the judgment of the members themselves forming the society—who are the only competent judges—whether they want a society and whether they will do their best to support it. The government and its officers have no means of discriminating, no means of probing the convictions and intentions of the people whom they urge to form a society. In France we shall see that those people will not form, or that when they form they will not burden themselves with any responsibility, which responsibility is the soul of cooperation. In Italy, likewise, people hang back and allow the money voted for them to go begging. You can not—even the wisest German bureaucrat can not—determine for another man whether he wants a credit society, nor make him put his shoulder to the wheel to make such a society answer. But if he does not, and if he does not want the bank, the society is more likely to do harm than good. There had better in that case be no society at all. Why will these all-wise governments so needlessly overshoot the mark? There truly is so much that they might do for cooperative credit in a thoroughly legitimate way. They might remove hindrances; they might pass appropriate and amend inappropriate laws; they might do any amount of good in the way of instruction of cooperation in schools and in special classes. And no one would grudge a penny that they might choose to spend in such ways. Instead of this they put the cart before the horse—urge people to form societies without taking care that they know what forming a society means.

which the farmers will patronize for short-time loans in the nations where they abound in the greatest numbers. With their aid poverty and usury have been banished, sterile fields have been made fertile, production has been increased, and agriculture and agricultural science raised to the highest point. Their educational influence is no less marked. They have taught the farmers the uses of credit as well as of cash, given them a commercial instinct and business knowledge, and stimulated them to associated action. They have encouraged thrift and saving, created a feeling of independence and self-reliance, and even elevated their moral tone.

The picture can hardly be overdrawn. Every traveler who visits the places where these little associations exist speaks in glowing phrases of the prosperity and contentment that prevail. They are organized on such simple lines that their management requires only ordinary intelligence. Failures have rarely occurred. In France and other countries they hold a record of having never lost a cent. The working capital and number of members of individual associations are so small as to be insignificant, yet they do one-third of the banking business of Italy; while the combined amount of their operations in Germany equal that of the commercial banks. But the mutual banks, both in town and country, are looked upon with favor in the financial world, because they keep millions of dollars of petty sums in circulation which except for them would be idle and hoarded. They are, in fact, feeders for the commercial banking system.

In 1909 in Belgium 458 banks with a membership of 25,762 had outstanding (roughly calculated) $4,000,000 of loans; in France 96 regional banks did upwards of $25,000,000 of business on a capital of $2,983,646, while the 2,983 local banks with a membership of 133,382 farmers had $2,622,241 of capital and a record of over $20,500,000 of operations. There were nearly 6,000 banks in Austria. The membership was over 725,666, and the loans ran over $86,500,000. In Italy 690 banks that furnished reports had a working capital of over $170,091,946. In Germany there is one bank for every 1,600 of the population, and the total business done was over $4,888,000,000. In one province there is a bank for every 3,000 acres of land; and so on for all other nations that have cooperative credit institutions. The rate of interest charged was one or two points lower than in commercial circles, yet these banks, with a few exceptions, made a fair profit on the turnover of their capital. In some instances it ran as high as 5 per cent and 7 per cent.

With this striking array of figures to show its stability and usefulness, it is remarkable that the farmers of the United States have been so slow to adopt this system of banking for temporary loans on personal security. It has existed in Canada for 22 years. In the Province of Quebec there are a number of mutual banks that have loaned hundreds of thousands of dollars. But Massachusetts is the only State in our country that has made an attempt to encourage its introduction. It already has a law allowing the incorporation of credit unions. It was passed in 1909 after a careful study of European legislation and furnishes an excellent example for the other States. The first concern to start under this law was the Myrick Credit Union at Springfield. In 12 months it had 105 members, a capital of $3,000, and $10,000 of outstanding loans. Interest rates have been low, yet it paid over 6 per cent dividends on its capital. Thirteen new unions were formed in 1911 and have $25,000 of capital. A pamphlet issued by the State bank commissioner gives a comprehensive description of the fundamental principles that a mutual association for personal credit must adhere to. We can not do better than to quote from it. They are as follows:

"First. That the association shall be organized on cooperative lines. As the members may be either borrowers or lenders, according to circumstances, its affairs must be conducted in such a way as to give fair and equitable treatment to both classes.

"Second. That the association shall be one of persons and not of shares. To this end each shareholder has one vote irrespective of the number of shares he holds. Furthermore, a limit is set to the numbers of shares, or the amount of deposit which a member may have in the association, in order that no one person may have a too dominating influence, or be able to damage the association by suddenly withdrawing large sums.

"Third. That loans shall be made only for the purposes which promise to result in a saving or a profit to the borrower. Each applicant for a loan must state the object for which he desires to borrow in order that the credit com-

LAND AND AGRICULTURAL CREDIT IN EUROPE.

It is the purpose of this report to give but a brief description of the land and agricultural credit associations and corporations in Europe, their origin, development, and relations to the State, the laws creating and governing them, the results obtained for the farmer and investor, and a few suggestions for improving the land and agricultural credit facilities in the United States.

The investigation conducted thus far warrants the conclusion that land and agricultural credit are so thoroughly organized in most of the European nations that real-estate securities are as liquid and sound as municipal bonds, while the honest, capable, and industrious farmer is able to supply himself with working funds for short or long time when desired. The institutions and also the systems devised for these objects have certain basic features in common but vary considerably in type and thereby show a remarkable adaptability to all sorts of social and economical conditions, such as exist in America. The rates of interest at which they are able to obtain and lend money fall even below the European commercial rate and are about one-third to one-half less than what prevail in the United States.

Farmers in many parts of Europe are as familiar with the credit and banking business as the tradespeople in towns and cities, and the great bulk of their loans have been made on personal or chattel security. The loans secured by land mortgages, as a rule, are not repayable in lump at the end of a few years, but run on for 30 or 50 years and are gradually wiped out by small semiannual payments, coming out of the income of the property. Foreclosures are infrequent, and no company dealing principally in these so-called long-term "amortizable" farm loans has failed or occasioned loss to investors in recent times. Farm paper and mortgage bonds are considered investments of the safest sort—the latter being listed on the bourse, or stock exchanges, and having an international market.

This almost complete organization of land and rural credit in advanced European nations was not a haphazard and spontaneous growth. It was brought about by the insistence of public and private individuals, philanthropists, scholars, bankers, legislators, agricultural societies, government commissions, and national assemblies, all studying and working in a common cause. The history of their efforts in the middle of the past century reads much like an account of the agitation which has been started in the United States by the American Bankers' Association, the Southern Commercial Congress, the Federal authorities at Washington, and other bodies and individuals, for financing the farmer, improving agricultural conditions, and encouraging the movement back to the soil. In Europe the agricultural banks and credit facilities were created before agricultural or even general education was attempted. The United States began at the opposite end. The American colleges and systems for teaching agriculture are among the oldest and best in the world, and millions of dollars have been appropriated by the Federal and State Legislatures since the passage of the Morrill Act in Lincoln's administration to aid this science in one way or another. Incalculable good has come therefrom, but the results would have been far greater if financial education had gone hand in hand with this work. It would have led to the study and introduction of the rural banking methods of Europe generations ago, and so familiarized the American farmers with the uses of credit that the lack of capital and excessive interest rates would not now be interfering with the agricultural development of the country.

COOPERATIVE CREDIT ASSOCIATIONS.

Personal credit in agricultural Europe is obtained usually by means of the cooperative credit associations. They are also used by artisans and small tradespeople in the towns and cities. These associations are in fact the only banks

up new areas, and introducing modern methods of cultivation; and it is of vital importance that this capital be obtainable at once in sufficient volume and on easy terms. The world-wide problem caused by the pressure of population upon the means of subsistence now confronts the United States in the very face of its matchless natural resources and vast acreage of arable lands still remaining untouched by the plow. The $385,000,000 of foodstuffs exported last year barely equaled 76 per cent of the annual interest charges on the debts the farmers owe.

The cause of the trouble is the lack of capital, and the remedy lies in financing the farmer and the landowner. This is the indisputable conclusion logically reached from examination into the actual conditions and from comparisons furnished by recent European history. The solution of the problem concerns the general welfare as much as does the currency and monetary reform, and it is gratifying to note that it seems destined to go side by side along with this undertaking. For as soon as the alarm was sounded the best talent of the Nation became enlisted, and now bankers, merchants, professional men, legislators, and private individuals in town and country, many impelled purely by patriotic and disinterested motives, have combined their efforts to better the situation before it pass to the acute and critical stage.

The establishment of agricultural cooperative credit associations is largely a matter for State legislation and encouragement. The making and the management of these little societies are so simple, and their success so inevitable where the environment is congenial to their growth, that without doubt they would spring up in multitudes as soon as the proper laws were passed, and in course of time develop systems as large and effective as those of Germany. A great many cooperative stores already exist in this country. Cooperation has been taught by farmers' journals for years, and the spirit of it is in the air. The organization of land credit, however, is a complicated task, especially since the idea is new in the United States and involved in a tangle of conflicting State laws and antiquated land-registration and taxation systems and foreclosure procedures. Many changes, amendments, and additions would have to be made in respect to all these before the way could be made clear for the formation of land-mortgage banks. In addition to the uniformity of laws, a uniformity of business methods must also be brought about. This means statutory regulations and limitations such as have been described in this report; and also official supervision. But this supervision need not be the bureaucratic kind of Europe, but similar to that exercised in the United States over national banks, savings banks, and public-utility corporations. Free scope for private enterprise and initiative should be allowed and encouraged, but the days of "wildcatting" in the United States are gone for good, and promoters should never again be given the opportunity to exploit the necessities of debtors and prey upon the public as was done during the farm-mortgage craze 18 or 20 years ago.

The only instrument by which land-mortgage banks can finance themselves, draw money from the public for investment in loans, are the debenture bonds; but these bonds will not circulate freely nor far from the place of issue unless they are known to have the same underlying values and give the same rights to the holder, regardless of whether they be secured by mortgages in Texas, Massachusetts, or in any other States. But possessed of these characteristics as guaranties of law, there is no reason why debentures of large mortgage banks and Landschaften should not be listed in stock markets and sold, negotiated, and exchanged as readily as railway and municipal securities, and thus equalize and reduce interest rates for farmers throughout the country.

The objects of the investigations set on foot by the Departments of State and Agriculture have been accomplished. The public is aroused and the movement has finally been started for organizing the land credit and improving agricultural credit facilities in the United States. The nonpartisan character of the interest awakened clearly indicates the next step to be taken. The persons foremost in this movement should get together, open headquarters at some convenient place in the Middle West, systematize the work of propaganda, and see that it advance along similar lines in all the States. Special conventions should be held in those States where the needs are most urgent. Later on a national convention should be assembled, or at least a national committee appointed to sit in continuous session. Every effort should be made to secure the uniformity so much to be desired in State laws and to give a proper direction to any Federal legislation which should be proposed. Such is the recommendation of this report.

BOYS' CORN CLUBS (SOUTHERN).

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Wednesday, January 22, 1913.

The committee this day met, Hon. John Lamb (chairman) presiding.

The CHAIRMAN. Gentlemen of the committee, we have the corn boys here this morning. Mr. Knapp, have you any of them who will make a speech to us? We are anxious to learn how this work progresses.

Mr. KNAPP. Yes, sir. There are 22 from the Southern States and 18 from the Northern States. The young lady is from Arkansas. She grew one-tenth of an acre of tomatoes.

STATEMENT OF MISS VIOLA LEWIS.

The CHAIRMAN. Have you ever been here before?

Miss LEWIS. No, sir.

The CHAIRMAN. You are not a corn-growing lady, are you?

Miss LEWIS. No, sir; I raise tomatoes.

The CHAIRMAN. We would be glad to hear from you on your tomato project.

Mr. KNAPP. Tell them how many tomatoes you raise.

Miss LEWIS. I can not exactly tell you. When I started I planted one-tenth of an acre, hoed it, staked them, and tied them, and I gathered the fruit. I raised 175 baskets of tomatoes off of that land, 85 cans of them. I raised two patches of turnips and have one patch growing now. I had one patch of beans, which started to bear, and had a few beans on them and died because it was too warm. I made $52.80 off of my tomatoes. [Applause.]

Mr. KNAPP. How about tomatoes for family use?

Miss LEWIS. Yes, sir; we used them.

The CHAIRMAN. I suppose your brother worked and you watched him?

Miss LEWIS. No, sir; I did all the work myself.

Mr. MAGUIRE. How much time did you put in?

Miss LEWIS. My goodness, I could not tell you. I would run out off and on.

Mr. MAGUIRE. Did you go to school?

Miss LEWIS. Yes; I went to school.

Mr. KNAPP. I suppose you would like to have Prof. Martin read the records?

STATEMENT OF MR. MARTIN.

Mr. MARTIN. I think the most surprising thing in the South is that the boys have filled in the gap between the record we had before and the present record. The yields which ran to 100 bushels now run up to 206 and 207 bushels. We have had boys in our delegation who have gone up to 227 bushels, but the ears were not so well filled in along about 160 or 165. You will notice these yields run from 150 to 200 bushels, and in that respect they are a little different from the reports made by the delegation heretofore. William Atkinson, of Alabama, produced 198 bushels, and J. P. Leach, from the same State, produced 196 bushels. They were so close together that the people of Alabama sent both of them. In some of the Western States we have some cotton clubs that have developed since the corn clubs have been making progress. We have two cotton boys from Arkansas.

Walter Bridges, of Georgia, who is a very small boy, produced 156 bushels. That is his mother you see with him. [Applause.]

We have several from Mississippi. The State Bankers' Association put up the money to send them from that State. We are just now beginning to get yields above the Mississippi River above 100 bushels. They had not been using so much fertilizer.

Frank G. Brockman, of Virginia, produced 167 bushels, a magnificent showing.

Mr. LEVER. What county is he from?

Mr. MARTIN. Amherst. The chairman of the committee is from Virginia, and Frank Brockman is a Virginia boy.

The CHAIRMAN. Stand up, Frank. I am glad to see you.

Mr. MARTIN. I want to say that the cost per bushel this year runs down very low.

STATEMENT OF FRANK G. BROCKMAN.

The CHAIRMAN. Mr. Brockman, tell us how you prepared that land. We are all farmers on this committee, and we would like to know your experience.

Mr. BROCKMAN. The ground was broken March 26. 14 inches deep. You want me to give the fertilizers?

The CHAIRMAN. Yes, sir.

Mr. BROCKMAN. On May 1, I used a thousand pounds of lime and 300 pounds of bone meal, and put that in with a drill, and then I used a disk harrow on it about five times, and ran a cultivator over it, too.

The CHAIRMAN. How far apart did you have the rows?

Mr. BROCKMAN. I planted the corn May 23, in rows 3 feet apart, 9 or 10 in a drill, and cultivated it five or six times.

The CHAIRMAN. Did you cultivate it perfectly level?

Mr. BROCKMAN. Yes, sir; not over 2 inches.

The CHAIRMAN. You did not throw any furrow?

Mr. BROCKMAN. No, sir. I gathered it about October 12—11,000 pounds.

Mr. LEVER. What was the cost of the fertilizer?

Mr. BROCKMAN. About $20.
Mr. HAUGEN. What was the total expense?
Mr. BROCKMAN. $35, with the lime and all.
The CHAIRMAN. What did you get for the corn?
Mr. BROCKMAN. I sold it for $3 a bushel, for seed, in New York.
Mr. LEVER. At the market price for corn, what would the profits be?
Mr. BROCKMAN. I do not know exactly what the market price is, but the State agent told me that the value of corn was $1 a bushel.
Mr. LEVER. That is worth too much.
Mr. CANDLER. Did you say you sold some for $3 a bushel in New York?
Mr. BROCKMAN. Yes, sir.
The CHAIRMAN. The present market price is 80 cents, and you must have had a clear profit of some $10 or $15 on that acre.
Mr. BROCKMAN. There were 167 bushels. It cost 22½ cents a bushel to produce it.
Mr. HAUGEN. Does that include your labor?
Mr. BROCKMAN. Yes, sir.
Mr. HAUGEN. How much did you count your labor?
Mr. BROCKMAN. Ten cents an hour, and the horse's labor at 5 cents an hour.
Mr. CANDLER. And you charged yourself rent for the land, $5?
Mr. BROCKMAN. Yes, sir.
Mr. CANDLER. They all charge themselves $5 for the use of the acre?
Mr. BROCKMAN. Yes, sir.
Mr. HAUGEN. I understood you to say that the total cost was $35 for the fertilizer and lime?
Mr. BROCKMAN. No, sir; all of it.
Mr. MAGUIRE. You think about $35 would cover the cost of it?
Mr. BROCKMAN. Between $35 and $39.
Mr. HAUGEN. So that your profit was between $95 and $100 at 80 cents per bushel?
Mr. BROCKMAN. Yes, sir.
The CHAIRMAN. Let these farmers take notice.
Mr. MARTIN. The office of grain standardization tested this land for moisture. Do you remember what your moisture test showed?
Mr. BROCKMAN. 10.85 per cent.
Mr. KNAPP. We can submit statements in writing from all of them.
The CHAIRMAN. I wish you would do that.
Mr. KNAPP. Harold Davis is here. He comes from Grayson, near Palestine, Tex. This is Mr. Young, from Texas.

STATEMENT OF HAROLD DAVIS.

Mr. YOUNG. What county are you from?
Mr. DAVIS. Anderson.
Mr. YOUNG. How old are you?
Mr. DAVIS. Fourteen.
Mr. YOUNG. From Mr. Gregg's district?
Mr. DAVIS. Yes, sir.
Mr. YOUNG. How did you make your corn grow?

Mr. DAVIS. I broke the land 10 inches deep and planted the corn in hard beds, about 18 inches apart, and 4-foot rows. I cultivated my corn four times.

Mr. YOUNG. What kind of fertilizer did you use?

Mr. DAVIS. I did not use any.

Mr. YOUNG. What kind of land is it?

Mr. DAVIS. Black loam.

Mr. KNAPP. Did you use stable manure?

Mr. DAVIS. No, sir.

Mr. KNAPP. What kind of corn did you plant?

Mr. DAVIS. The corn that is developed in the county.

Mr. LEVER. How much did you make on the acre?

Mr. DAVIS. $122.50.

Mr. LEVER. What was the cost of cultivation?

Mr. DAVIS. It was 9 cents a bushel.

Mr. YOUNG. What is the corn worth there?

Mr. DAVIS. In the market it is six bits a bushel. [Laughter.]

Mr. MARTIN. Seed corn is $2 a bushel, and the ordinary price of corn is six bits.

The CHAIRMAN. I wonder if that baby boy would like to tell us about his corn.

STATEMENT OF WALTER BRIDGES.

Mr. BRIDGES. I got my stuff, and then I hauled out the mule and broke the land with a John Cass steel plow, 15 inches in the subsoil, and laid my rows off, and planted 8 in a drill, with the rows about 28 inches apart. 6 inches in the drill, and then I came back, and then I turned it with the plow, and then come back and put 2 tons of manure on, and then come back and put soda on, and then come back again and put manure on, and then put soda on again, and then I tended it until the corn grew too large to plow.

The CHAIRMAN. Did you work it with a little mule or a billy goat?

Mr. BRIDGES. A big mule.

Mr. LEVER. Isn't your mule a pretty sensible mule? Does not your mule know something about corn?

Mr. BRIDGES. He knows how to eat it. [Laughter.]

Mr. LEVER. How old are you?

Mr. BRIDGES. Eleven.

Mr. MARTIN. They are all over 10.

The CHAIRMAN. You did not plow that land yourself, did you?

Mr. BRIDGES. I plowed it once.

Mr. YOUNG. How much corn did you get?

Mr. BRIDGES. One hundred and fifty-six bushels.

Mr. YOUNG. How much is corn worth down there?

Mr. BRIDGES. $3.

Mr. YOUNG. Do you know how much you sell it for on the market? You know you could not sell it all for seed.

Mr. MARTIN. Eighty cents.

Mr. KNAPP. He raised for seed; he had none for market.

Mr. MAGUIRE. What county is he from?

The CHAIRMAN. Northern Georgia. Is the boy here who worked with a billy goat?

Mr. KNAPP. No, sir.

STATEMENT OF COLLIS RITTER.

Mr. KNAPP. This is Mr. Ritter.

Mr. CANDLER. Glad to see you.

Mr. RITTER. In 1911 I used 300 pounds of commercial fertilizer. In 1909 I put 400 pounds of acid phosphate into my land. In 1911 I put acid phosphate there, and turned it under 10 inches deep; May 2 I laid it over with a shovel, and left it a little bit, and then I used a "Geewhiz" cultivator. I worked my corn until it topped. There was a committee there that measured an acre of land, and gathered the corn, and gave me a total of 206 bushels and a fraction. It cost me 13.6 cents a bushel. The market price was about 85 cents, and I sold seed corn to Louisiana, and all through my county, for $2 a bushel.

Mr. TAGGART. What county?

Mr. RITTER. State of Mississippi, Jones County.

The CHAIRMAN. Greatest State in the country. [Laughter.]

Mr. KNAPP. There is a boy who was before the committee last year—Ben Reevs, of Georgia. He made a splendid record last year. This year he planted 5 acres and got 713 bushels on those 5 acres. He made enough money so that now he is attending the college of agriculture of the State and paying his own way.

Mr. CANDLER. Where do you live?

Mr. RITTER. Seventeen miles from West Laurel, Jones County.

The CHAIRMAN. Have you been to an agricultural school?

Mr. RITTER. No, sir; I never went to an agricultural school.

Mr. CANDLER. Well, you have done wonderfully well.

Mr. YOUNG. How did you get your information about the fertilizer?

Mr. RITTER. From the Government.

Mr. YOUNG. Do you use the bulletins?

Mr. RITTER. Yes, sir.

The CHAIRMAN. Much obliged.

Mr. KNAPP. We have some boys from the North.

STATEMENT OF MR. O. H. BENSON.

Mr. BENSON. You are all aware, I presume, of the time when the work was started in the North on the same plan as in the South. I worked with Dr. Lath before I had charge of the work in the North. This work was started July 1, a little late for the regular season. We have been very much encouraged in the way people have taken hold of the work, and have undertaken to bring forth a good record this year. The State of Ohio this year took up the work, but only partially adopted the regular business basis of what we call corn-club work, which is the whole job, from planting the seed to making the report, when the profit on the investment is shown. They simply limited it this year to the yield. They had 92 boys, and averaged 100 bushels to the acre. Indiana has 20 boys who averaged 100 or more; Illinois, 32; Iowa, 56; Nebraska, 14; and Maryland, 11. One boy from Maryland, Leroy Nichols, is here. He made 150 bushels. I think that is a remarkable yield for the State of Maryland. Ethan

Allen, of West Virginia, made 125 bushels, and, for a State like West Virginia, those of you who are familiar with that territory know that it is rather a remarkable yield. It is well for you to recognize this fact: The North will never be able to grow a prolific strain of corn. No one will handle the prolific strain except the boys in Kentucky. The first time the prolific strain of corn was brought into Kentucky some of the highest yields had been made in that State. It had never been introduced as far north as that.

Mr. LEVER. Why does it not grow in the North?

Mr. BENSON. It is a subtropical strain of corn. I do not think it is possible. There is a difference of six weeks, isn't there, Dr. Galloway?

Dr. GALLOWAY. Yes, sir.

Mr. BENSON. From six weeks to three months. I have seen the corn grow in both places, and I do not believe it is possible to go as far north as Ohio and make the regular prolific corn grow. I suggested to a number of the boys that this year they select their seed from the same layer, but from two stalks; I do not know whether that is possible. I talked to Dr. Hartley, a specialist in that work, and he seemed to think that that may develop the two-year strain.

Now, Hosea Cornwell, of Newman, Ill., comes from Congressman McKinley's district, made a very good yield, 150 bushels. This young man, the champion, selected 11 bushels of seed corn by hand—I have a photograph here.

The CHAIRMAN. Now put up some of these western boys or northern boys. We know neither North nor South in this committee.

Mr. BENSON. There is Leroy Nichols, from Maryland.

STATEMENT OF LEROY NICHOLS.

Mr. NICHOLS. Well, we had a teacher in agriculture at Sandy Spring, where I go to school, and last spring, when I was trying to raise corn, he organized a club in the hands of the Agriculture Department, and there were 10 boys went into this corn club, and only 3 of them came out and reported anything; and he gave us some instructions—not as many, I suppose, as he could have given. [Laughter.] We asked him, if we couldn't make more corn, if he could give us more instructions about it. [Laughter.] Our top soil is not very deep—only about 10 or 11 inches. Then I plowed it 8 or 9 inches and got it in good condition with 15 bushels of lime. Before I plowed it I put on four loads of manure and then 200 pounds of fertilizer. I did not put very much on it because it had potatoes in it the year before and I did not think it needed so much fertilizer. Then I put corn in on the 10th of May, with rows 3½ feet apart, 2 feet between hills.

The CHAIRMAN. How many stalks in a hill?

Mr. NICHOLS. Two. Then I cultivated it three times and hoed it once. The season was very good. The weeds did not grow very large because the corn just shut them out. Then, about last September I cut the corn and shocked it, and shucked it about the last of November, and then I had 150 bushels of corn. I had two of the committee and two uninterested parties to help measure the corn.

The CHAIRMAN. Did you do all the work yourself?

Mr. NICHOLS. Yes, sir; most all of it except plowing. We did not have to do all the work, because the teacher said we could get somebody else to do the work, and be an overseer.

The CHAIRMAN. What is your county in Maryland?

Mr. NICHOLS. Howard County; but I go to school in Montgomery. This little school was part of the Department of Agriculture.

Mr. BENSON. This instructor was one of the teachers in this school.

The CHAIRMAN. When he gives you more instruction I suppose you will get 200 bushels?

Mr. NICHOLS. Yes, sir. [Laughter.]

Mr. BENSON. It is interesting to know that the instructor wrote to the department asking permission if he could not get the instruction to take it up. I wrote him that I would be glad to do so, provided he would give special attention to the club work.

The CHAIRMAN. We are very much obliged to you. You have made a nice statement.

Mr. NICHOLS. You are very welcome, sir.

STATEMENT OF HOSEA CORNWELL.

Mr. CORNWELL. I plowed my ground on May 8, and I used a disk harrow on my ground after I plowed it, and I planted my corn the 1st day of May, 1910. After a while the corn had not come up yet, and I dug up the ground with a disk harrow and planted the corn May 20, and the corn came up very fast. There was lots of moisture in the ground. I cultivated it the 1st day of June first. I cultivated my ground three times, and the corn grew so fast that it grew 4½ feet in one week. You would hardly think that, but it grew so fast that I did not have time to go through it with the plow. The last time it was too big.

The CHAIRMAN. You could see it grow?

Mr. CORNWELL. Yes, sir; I could see it grow. [Laughter.] I forgot to state that I planted the rows 22 inches apart, drilled the corn 7 inches—a grain every 7 inches.

Mr. LEVER. Did you use any fertilizer?

Mr. CORNWELL. Yes, sir; about 500 pounds of fertilizer and 10 loads of black manure.

The CHAIRMAN. How many bushels did you make?

Mr. CORNWELL. One hundred and fifty.

The CHAIRMAN. What did it cost you?

Mr. CORNWELL. Twenty-nine and one-third cents a bushel.

The CHAIRMAN. What did you get for it?

Mr. CORNWELL. I have not sold any of it yet.

The CHAIRMAN. What is corn worth in Illinois?

Mr. CORNWELL. Forty-five cents a bushel.

Mr. YOUNG. What is the character of the soil?

Mr. CORNWELL. It is a black loam soil.

Mr. MAGUIRE. What is your age?

Mr. CORNWELL. Sixteen; I was 15 years old after my corn was planted.

The CHAIRMAN. You grow faster than your corn. [Laughter.] We are very much obliged to you. Professor, have you any others?

Mr. MARTIN. There is a young man from Virginia here with a record of 142.2. He is Ethan Allen.

STATEMENT OF ETHAN ALLEN.

Mr. ALLEN. Although this is only the second year of the corn-club work, the number last year was only 200; in 1911 the number of contestants was 4,756, and I expect next year it will be 13,000. The ground I grew my corn on was rolling West Virginia soil, with hardly any rocks. There was corn there in 1911, and it has been cultivated for about 90 years, I think, and the ground was plowed May 10, 1910, with a deep harrow. The corn was planted May 21, 3 feet 6 inches apart, so that we could cultivate it both ways; five cultivations from about the 1st of August. I think my corn began to grow like Mr. Cornwell's. It just jumped. It was raining, and the wind blew, and I had to cut it October 15. It weighed 9,500 pounds.

The CHAIRMAN. Have you been to an agricultural school?

Mr. ALLEN. Oh, a little, in Morgantown. My corn was grown in Morgantown. It made about 140.2 bushels per acre, and cost me 25 cents per bushel to produce it. Corn in West Virginia is worth about 70 cents a bushel, so that gave me $80 or $90.

The CHAIRMAN. Well, sir, I wish you would go to Virginia, where you belong, anyway. [Laughter.]

Mr. BENSON. There are quite a number of boys here from Illinois, who have made 145 bushels, and so on. We do not want to impose upon your time.

The CHAIRMAN. We will hear one more.

STATEMENT OF LEON KELLY.

Mr. KELLY. I think, in the first place, that there was a misstatement about my yield. It was 119.4. In our county we had to raise a half acre of each kind of corn—a half acre of fertilized and a half acre of unfertilized land, and the unfertilized half had to be tended the same as the fertilized half. When I tested my seed corn it tested 98. I planted my corn 7 inches deep in last year's land. I planted my corn May 18, and in four days it came up. From the very start you could see the difference, the fertilized having the darkest color and being a good deal taller.

Mr. HAUGEN. What was the difference in yield?

Mr. KELLY. Well, the total cost of the fertilized was at the rate of 29 cents plus per bushel and the unfertilized was 12 cents. Corn at that time was worth 42 cents, and I made a gain of 12 cents plus on the corn in the unfertilized half and 21 cents gain on the fertilized half.

The CHAIRMAN. Gentlemen, we have the Chief of the Bureau of Plant Industry here.

Mr. TAGGART. How does it occur that you have no such experiments as this going on in Kansas?

The CHAIRMAN. Because they have so much corn growing there now. We have the Chief of the Bureau of Plant Industry with us—Dr. Galloway—and he can congratulate the boys in better language than a plain old farmer like myself, and I ask him to express the gratification of the Bureau of Plant Industry, as well as the Department of Agriculture, at seeing you here this morning, and wish you good, long life and prosperity. [Applause.]

STATEMENT OF DR. GALLOWAY.

Dr. GALLOWAY. Mr. Chairman and ladies and gentlemen, the chairman himself has made the happiest and most congratulating statement. I feel that I can not say much further. Just before we came up here the boys had the pleasure of being received by the Secretary, and he gave them one of his characteristic speeches, in which he told them, among other things, that this would be the last time he would ever have the pleasure of seeing them, and that he wished to express his great pleasure, hoping they would go back to their homes and do more for their country than they had hitherto done. As the chairman has just stated, it is my privilege and pleasure to have charge of this large bureau, and it has been my pleasure and privilege to come before this committee at various times. I want to say that in every case in which I have come before this committee the committee has always done everything they can reasonably be asked to do to carry out legislation. If you will recall, this work in the Northern States is comparatively new. It only started last July. We hope to extend the work as rapidly as conditions warrant us. We do not want to go too fast. I believe in being conservative in these matters, presenting our wants before the committee in a conservative manner. The average yield of corn in this country in the last 20 years has remained just the same, taking the figures as these boys have set them forth this morning, and you can see how much there is to do in bringing up the average yield for the entire country.

I do not think there is any need to say anything further. I want to congratulate you for coming to Washington and on having the privilege of coming before this committee, which, in my opinion, is the most constructive committee in the whole Government. Having heard you explain to this committee the work that you are doing, describing that work, we express our thanks to you, and that is all I have to say. [Applause.]

The CHAIRMAN. Gentlemen, we wish you a safe and happy return to your homes, that I know must be delightful homes from the character and appearance of you young gentlemen here, and may happiness and contentment follow you all the days of your lives. We are glad to have heard the young lady, and we hope at some time to eat some of those tomatoes. We are very much obliged to you.

BOYS' AND GIRLS' CLUB WORK IN THE NORTHERN AND WESTERN STATES.

Mr. Chairman and gentlemen of the committee, I take pleasure in presenting to you a few facts concerning the boys' and girls' club work in the way of results for this, our first year in northern and western territory. You will recall, of course, that this work was started on July 1, 1912, a little late to get the best results for the 1912 corn crop. Considerable work was done, however, earlier in the season by correspondence in order to get the work under way, and to secure the cooperation of the agricultural colleges in the several States for the purpose of getting the boys and girls to work in time for the preparation of seed bed, planting, etc.

It never will be possible for the boys in the northern territory to make the same enormous yields per acre as have been made in the Southern States. There are two very important reasons for this. First, the difference of from four to eight weeks in the length of the growing season, and, second, the Northern States have not been able up to the present time to successfully grow and mature the prolific strain of corn which is the leading corn for the southern territory. The northern corn is a single-ear variety, while the prolific corn will grow from two to eight ears of corn to

the stalk. The results of the club work for the past year show conclusively, however, that careful direction and scientific methods of farming will increase the corn crop yield very materially.

Kentucky has reported 58 boys with over 100 bushels per acre. The highest yield was 160 bushels.

Our champion club boy from Maryland made 150 bushels on 1 acre, a yield quite remarkable for the State of Maryland.

Iowa reports 26 boys with 100 or more bushels to the acre, Illinois reports 46, Indiana 23, and Ohio 91. All over 100 bushels per acre.

The following paragraphs contain statements as to some of the champion corn growers of the northern territory with reference to yield, cost of production, etc., together with some interesting facts in regard to how the crop was made:

Leroy Nichols, Highland, Howard County, Md.: Prepared his seed bed early, about 7 inches in depth, harrowed with a spring tooth harrow two times just before planting, used 4 loads of manure, 200 pounds of commercial fertilizer 3–8–2, planted corn 3½ feet between rows and 2 feet in the rows, used yellow dent variety of corn, cultivated three times with sulky plow and hoed once. Seven neighbors visited his corn-club plat during the growing season. Total yield, 150 bushels; average cost per bushel, 16.9 cents.

Hosea D. Cornwell, Newman, Douglas County, Ill.: Selected acre of deep loam with clay subsoil, plowed early, 7 inches deep, harrowed 12 times before planting, used 10 loads manure and 1,025 pounds of home-mixed fertilizer, analysis 2–10–2. Used white dent corn testing 100 per cent vitality, cultivated three times with two-horse walking cultivator. Corn was damaged by root lice and injured by storm. About 85 friends and neighbors visited the club plat during the growing season. Kept a dairy of weather and crop conditions for the season. Selected 11 bushels of seed corn by hand. Double disked three times between plowing and planting. Yield, 150.45 bushels; average cost of production per bushel, 29.6 cents.

Lester Bryant, Rockfield, Ky.: Cultivated 1 acre of Boone County White. Cultivated 12 times at a depth of 1½ to 2 inches. Made a yield of 148 bushels and 55 pounds, at a total cost of $19.02. Cost per bushel, 12¾ cents; net profit on acre, $70.38.

Earl Zeller, Cooper, Iowa: Cultivated 1 acre of Reid's Yellow Dent. Depth of plowing seed bed 6 inches. Cultivated 5 times; shallow cultivation. Total yield, 141 bushels and 45 pounds; average cost of production per bushel, 9¾ cents; total profit on acre, $83.43.

Ashley La Velle, Postville, Iowa: Reid's Yellow Dent corn. Prepared seed bed by deep plowing in early spring. Loam top soil, clay subsoil. Cultivated 4 times, shallow. Yield, 131.3 bushels; average cost of production per bushel, 10¼ cents; total net profit per acre, $52.72.

Emmitt Laughlin, Waukon, Iowa: Prepared seed bed by plowing early spring, 6 inches in depth. Planted the Leaming variety of corn. Yield, 128.35 bushels; average cost of production per bushel, 8 cents; net profit on acre, $66.37.

J. Leon Kelly, Monticello, Ill., Piatt County: Prepared seed bed by plowing 7 inches deep. Harrowed 2 times; used 5 loads of barnyard manure and an application of bone meal (500 pounds). Corn slightly damaged by storm. Many neighbors visited corn plat. Tested seed corn, 98 per cent vitality. Total yield, 119.25 bushels; average cost of production, 30 cents per bushel.

Ethan Allen, Morgantown, W. Va.: Prepared seed bed by plowing 9 inches deep; planted Reid's Yellow Dent corn tested for vitality. Total yield, 140.2 bushels; average cost of production per bushel, 25 cents; net profit on acre, $66. Cultivated corn 5 times.

Edward G. Gallrein, Valley Station, Ky.: Prepared seed bed by deep plowing; planted Johnson County White corn. Total yield, 146 bushels and 36 pounds, at an average cost of 14 cents per bushel; net profit on acre, $67.33.

Dewey Hanes, Arcanum, Ohio: Prepared his seed bed by deep plowing; made a yield of 139.12 bushels. The Ohio contest, unlike the contests conducted in other localities, was conducted by the commissioner of agriculture. The question of profit on investment was not required in the competition for the championship of the State.

Ernest Russ ll, South Hadley, Mass.: Made a yield of 68.9 bushels. The profit on investment was not considered in the competition for this prize.

Bert Waggoner, Gays, Moultrie County, Ill.: Prepared seed bed in April. Plowed 6 inches deep. Harrowed four times before planting. Used no manure and no fertilizer. Checkrowed 3½ feet each way. Used Boone County White corn, testing 80 per cent vitality. Damaged by chickens and storm. Twenty-five people visited acre during season. Selected seed corn by hand. Total yield, 105.9 bushels; average cost per bushel for production, 12¼ cents.

Robert Michael, Christian County, Assumption, Ill.: Prepared seed bed in May. Plowed 5 inches deep. Harrowed twice. Used no fertilizer nor manure. Planted

corn 3½ feet apart between rows and 3 feet in rows. Planted Reid's Yellow Dent corn, testing 88 per cent vitality. Cultivated four times not more than 2 inches in depth with weeder and surface cultivator. Crop injured by grub worm. Club plat was near public highway and observed by all passers-by. Total yield, 106 bushels; average cost per bushel, 11 cents; net profit on acre, $30.80.

Ralph G. Wooters, Moweaqua, Shelby County, Ill.: Plowed the ground for seed bed 6 inches deep. Harrowed four times. Used 5 loads of barnyard manure. Planted 3½ feet both ways. Cultivated 4 times with shovel and surface cultivator. Teacher and 25 others visited club plat and member during season. Yield, 96.9 bushels; average cost of production per bushel, 23 cents.

Leo Miller, Springfield, Sangamon County, Ill.: Prepared seed bed in May. Plowed 5 inches deep. Harrowed three times before planting. Used 5 loads of barnyard manure. Planted corn 3½ feet apart and 18 inches in the row. Tested seed corn for vitality. Used Reid's Yellow Dent corn. Cultivated three times about 3 inches in depth. Used 3 loads of barnyard manure for top dressing when corn was about a foot high. Club plat visited by teacher and 6 others during season. Hoed the entire acre by hand once. Total yield, 112.47 bushels.

Herman Rucker, Decatur, Macon County, Ill.: Yield, 145.41 bushels.

Ivan Houser, Farmer City, Dewitt County, Ill.: One hundred and twenty-two and six-tenths bushels as total yield. Average cost of production per bushel, 12.4 cents.

Robert Reeder, Mendota, Bureau County, Ill.: Total yield on acre, 111.5 bushels.

William Southward, Kinmundy, Ill.: Total yield of 117.75 bushels.

Ivan Goble, Charleston, Coles County, Ill.: Raised 108.59 bushels at a cost of 20 cents per bushel.

Wilson Francis, McNabb, Putnam County, Ill.: Had a yield of 94.50 bushels on his acre.

Wilbur Corbin, Wheeler, Ill.: Total yield, 82 bushels to his acre.

James P. Brown, Raymond, Montgomery County, Ill.: 59 bushels.

John S. Lane, Lacon, Marshall County, Ill.: Made a record of 100.40 bushels at a cost of 27 cents per bushel.

Glen H. Gordon, Urbana, Champaign County, Ill.: Had a total of 107.50 bushels at a cost of 22½ cents per bushel.

Most of the boys submitted samples of their corn for the moisture test. The moisture tests of all of the corn club winners represented above graded from 11 per cent to 21 per cent moisture content.

Respectfully submitted.

O. H. BENSON,
Specialist in Charge of Club Work, Northern and Western States.

(Office of Farm Management.)

Thereupon the committee proceeded to the consideration of other matters.

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